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A 39-year-old right-handed man is brought to the office by his wife due to concerns about his behavior. Two months ago, the patient was robbed and hit in the head and knees with a baseball bat when he resisted. He initially had difficulty walking, but his injuries have since healed. His wife and other family members say that his overall demeanor has changed significantly since the attack. Prior to the assault, the patient was kind, considerate, and extremely polite. However, since the attack, he has been very irritable and rude, and was recently fired from his job for insulting customers and making socially insensitive comments to coworkers. Damage to which anatomical region of the brain is the most likely explanation for this patient's symptoms?

A. Corpus callosum
B. Dominant parietal cortex
C. Dominant temporal cortex
D. Lateral prefrontal cortex
E. Nondominant parietal cortex
F. Nondominant temporal cortex
G. Orbitofrontal cortex

Submit

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- A. Corpus callosum (1%)
- B. Dominant parietal cortex (4%)
- C. Dominant temporal cortex (5%)
- D. Lateral prefrontal cortex (51%)
- E. Nondominant parietal cortex (2%)
- F. Nondominant temporal cortex (2%)
- ✓ G. Orbitofrontal cortex (31%)

Omitted
Correct answer
G

31%
Answered correctly

51 secs
Time Spent

03/20/2020
Last Updated

Explanation

This patient's **personality change**, **disinhibition**, **and irritability** are most likely due to damage affecting the **orbitofrontal cortex** (OFC). The

This patient's **personality change**, **disinhibition**, **and irritability** are most likely due to damage affecting the **orbitofrontal cortex** (OFC). The OFC is located in the frontal lobe and has strong modulatory connections to the limbic system (ie, the brain's primary emotional system); it is involved in behavioral and emotional regulation.

Pathological behavioral and emotional changes are more commonly seen with bilateral, rather than unilateral, injury to the OFC. Disinhibition may be associated with significant impulsivity and loss of social etiquette, whereas increased irritability in the context of disinhibition may lead to frank, aggressive behavior. Diagnostic workup includes obtaining information from family and friends about personality changes, neuropsychological testing, and structural brain imaging.

(Choice A) Damage to the corpus callosum can result in the "split-brain" syndrome. Although these patients may appear normal in general social situations, further evaluation can demonstrate lack of interhemispheric transfer of information (eg, patient unable use one hand to retrieve an object palpated with the other hand).

(Choices B and E) The parietal cortex processes and interprets visual, auditory, and motor signals received from other brain areas. Parietal cortex damage results in difficulties with spatial and visual perception. Dominant lesions (>95% of right-handed and >50% of left-handed patients are left hemisphere dominant) result in Gerstmann syndrome with right-left confusion and difficulty with writing and mathematics. Nondominant parietal cortex lesions (most commonly right-sided) can result in hemi-neglect, constructional apraxia, and denial of the problem.

(Choices C and F) Temporal cortex injury can cause disturbances in language, sensory interpretation, and impaired memory. These patients can also exhibit behavioral changes, such as apathy, hyperorality, hypersexuality, and visual agnosia as seen in Klüver-Bucy syndrome. Nondominant (usually right-sided) lesions can affect nonverbal memory, including musical ability; dominant left-sided lesions can affect verbal memory, such as word recognition. This patient's symptoms are most characteristic of an OFC injury.

(Choice D) The lateral prefrontal cortex is involved in executive functioning, which includes motivation, organization, planning, and purposeful action. Damage to the lateral prefrontal cortex may result in dysexecutive syndrome, a syndrome characterized by significant difficulties performing these functions.

Educational objective:
Patients with orbitofrontal cortex injury often experience personality changes, disinhibition, and irritability secondary to impairment of the behavioral and emotional modulatory systems.

References

object palpated with the other hand).

(Choices B and E) The parietal cortex processes and interprets visual, auditory, and motor signals received from other brain areas. Parietal cortex damage results in difficulties with spatial and visual perception. Dominant lesions (>95% of right-handed and >50% of left-handed patients are left hemisphere dominant) result in Gerstmann syndrome with right-left confusion and difficulty with writing and mathematics. Nondominant parietal cortex lesions (most commonly right-sided) can result in hemi-neglect, constructional apraxia, and denial of the problem.

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Educational objective:
Patients with orbitofrontal cortex injury often experience personality changes, disinhibition, and irritability secondary to impairment of the behavioral and emotional modulatory systems.

References

- A review of social disinhibition after traumatic brain injury.
- The role of the orbitofrontal cortex in cognition and behavior.
- Traumatic brain injury: relation to executive dysfunction and the frontal lobes.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Traumatic brain injury
Subject	System	Topic

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A 60-year-old woman comes to the office due to uncontrollable movements that have worsened. Medical history is significant for hypertension, hyperlipidemia, osteoarthritis, and schizophrenia, and she has been on a stable medication regimen for years. Throughout the interview, she exhibits facial grimacing, lip smacking, and twisting movements of her hands and feet. The patient has lived in a group home for many years and worries that her housemates are avoiding her because her symptoms make her look "strange." On mental status examination, the patient makes poor eye contact and is generally distrustful but has no specific delusions or hallucinations. Which of the following is the most likely diagnosis?

- A. Acute dystonia
- B. Acute psychotic episode
- C. Akathisia
- D. Neuroleptic-induced parkinsonism
- E. Neuroleptic malignant syndrome
- F. Tardive dyskinesia
- G. Tic disorder

Submit

A 60-year-old woman comes to the office due to uncontrollable movements that have worsened. Medical history is significant for hypertension, hyperlipidemia, osteoarthritis, and schizophrenia, and she has been on a stable medication regimen for years. Throughout the interview, she exhibits facial grimacing, lip smacking, and twisting movements of her hands and feet. The patient has lived in a group home for many years and worries that her housemates are avoiding her because her symptoms make her look "strange." On mental status examination, the patient makes poor eye contact and is generally distrustful but has no specific delusions or hallucinations. Which of the following is the most likely diagnosis?

- A. Acute dystonia (2%)
- B. Acute psychotic episode (0%)
- C. Akathisia (6%)
- D. Neuroleptic-induced parkinsonism (6%)
- E. Neuroleptic malignant syndrome (1%)
- ✓ F. Tardive dyskinesia (80%)
- G. Tic disorder (3%)

Omitted
Correct answer
F

80%
Answered correctly

01 sec
Time Spent

06/06/2020
Last Updated

Explanation

Important antipsychotic side effects	

Important antipsychotic side effects	
Extrapyramidal side effects	• Acute dystonic reaction: Sudden-onset, sustained muscle contractions • Akathisia: Subjective restlessness with inability to sit still • Drug-induced parkinsonism: Tremor, rigidity, bradykinesia, masked facies
Tardive dyskinesia	• Involuntary movements after chronic use (eg, lip smacking, choreoathetoid movements)
Neuroleptic malignant syndrome	• Fever, rigidity, mental status changes, autonomic instability

This patient has a diagnosis of schizophrenia and has likely been treated with antipsychotic medications for many years. Her abnormal movements are characteristic of **tardive dyskinesia** (TD), a movement disorder associated with **long-term treatment** with **dopamine antagonist medications** (eg, antipsychotics, metoclopramide). Possible mechanisms of TD include development of hypersensitive post-synaptic D2 receptors following prolonged D2 blockade and an imbalance between D1 and D2 receptor-mediated effects.

TD typically consists of **repetitive, rhythmic, involuntary movements** of the **tongue, lips, face, trunk**, and **extremities**. Orofacial dyskinesias (eg, facial grimacing, tongue movements, lip smacking and puckering) are most common, but choreoathetoid movements of the trunk and limbs can also occur. Older age and exposure to first-generation antipsychotics increase the risk of developing TD. Treatment typically includes discontinuing the offending agent when feasible.

(Choices A, C, and D) TD can be differentiated from acute extrapyramidal syndromes that also result from exposure to dopamine antagonists. Acute dystonia involves a distressing, sustained, involuntary contraction of the neck, mouth, tongue, or eye muscles that typically occurs within the first few days of receiving a dopamine antagonist. Akathisia is characterized by physical restlessness, difficulty sitting still, and a compelling need to move. Drug-induced parkinsonism manifests with tremor, bradykinesia, and cogwheel rigidity.

(Choice B) Poor eye contact and general distrust are symptoms that frequently persist in patients treated with antipsychotics during the maintenance phase of schizophrenia. Signs and symptoms of an acute psychotic episode include delusions, hallucinations, and disorganized speech and behavior.

(Choice E) Neuroleptic malignant syndrome, which is also an adverse reaction related to antipsychotic treatment, is a rare and potentially fatal

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(Choice B) Poor eye contact and general distrust are symptoms that frequently persist in patients treated with antipsychotics during the maintenance phase of schizophrenia. Signs and symptoms of an acute psychotic episode include delusions, hallucinations, and disorganized speech and behavior.

(Choice E) Neuroleptic malignant syndrome, which is also an adverse reaction related to antipsychotic treatment, is a rare and potentially fatal syndrome characterized by delirium, high fever, severe muscle rigidity, and autonomic instability.

(Choice G) The characteristic feature of all tic disorders involves brief, recurrent, nonrhythmic motor movements (eg, eye blinking) and/or vocalizations (eg, grunting), beginning in childhood.

Educational objective:
Tardive dyskinesia consists of abnormal involuntary movements of the mouth, tongue, face, extremities, or trunk associated with prolonged exposure to antipsychotics. Characteristic movements include lip smacking, facial grimacing, tongue protrusions, and choreoathetoid movements of the head, limbs, and trunk.

References

- Tardive dyskinesia: recognition, patient assessment, and differential diagnosis.
- Tardive dyskinesia (syndrome): current concept and modern approaches to its management.

Behavioral science Psychiatric/Behavioral & Substance Abuse Antipsychotics

A 38-year-old man is brought to the emergency department by ambulance due to severe abdominal pain and undergoes an emergency appendectomy. Following a successful operation and recovery, the patient questions whether the appendectomy was absolutely necessary. He doubts the surgeon's explanation that the surgery was potentially lifesaving, angrily suggests that the hospital is taking advantage of his excellent medical insurance, and makes vague threats to sue the hospital. He asks to be discharged immediately, and explains, "I've earned everything I have on my own, and this hospital isn't getting any of it." When asked if he has any relatives or friends the team can speak with, he says, "I haven't talked to my family in 20 years, and I wouldn't call anyone my friend. Even if I did, that's none of your business." Which of the following is the most likely explanation of this patient's behavior?

A. Antisocial personality disorder
B. Brief psychotic disorder
C. Delusional disorder, persecutory type
D. Narcissistic personality disorder
E. Paranoid personality disorder
F. Schizoid personality disorder
G. Schizotypal personality disorder

Submit

A 38-year-old man is brought to the emergency department by ambulance due to severe abdominal pain and undergoes an emergency appendectomy. Following a successful operation and recovery, the patient questions whether the appendectomy was absolutely necessary. He doubts the surgeon's explanation that the surgery was potentially lifesaving, angrily suggests that the hospital is taking advantage of his excellent medical insurance, and makes vague threats to sue the hospital. He asks to be discharged immediately, and explains, "I've earned everything I have on my own, and this hospital isn't getting any of it." When asked if he has any relatives or friends the team can speak with, he says, "I haven't talked to my family in 20 years, and I wouldn't call anyone my friend. Even if I did, that's none of your business." Which of the following is the most likely explanation of this patient's behavior?

- A. Antisocial personality disorder (6%)
- B. Brief psychotic disorder (1%)
- C. Delusional disorder, persecutory type (9%)
- D. Narcissistic personality disorder (23%)
- ✓ E. Paranoid personality disorder (47%)
- F. Schizoid personality disorder (10%)
- G. Schizotypal personality disorder (2%)

Omitted
Correct answer
E

47%
Answered correctly

01 sec
Time Spent

06/06/2020
Last Updated

Explanation

Paranoid personality disorder	
Clinical features	• Pervasive pattern of distrust & suspiciousness beginning in early adulthood & occurring in a variety of settings (no clear delusions) ◦ Believes being exploited & deceived by others ◦ Interprets benign comments & events as threats; reacts angrily ◦ Bears grudges ◦ Questions loyalty of partner without justification
Differential diagnosis	• Delusional disorder (delusions only) • Schizophrenia (delusions, hallucinations, disorganization, negative symptoms) • Schizotypal personality disorder (eccentric behavior & thinking, unusual perceptual experiences)

This patient's distrust, suspicion about the surgeon's motives, and lack of sustained relationships are suggestive of **paranoid personality disorder**. Patients with this disorder exhibit a **pattern** of **pervasive distrust** of others beginning in early adulthood. These individuals tend to have minimal interpersonal relationships due to doubts about others' intentions and concerns that personal information will be used against them.

Although paranoid personality disorder involves paranoid interpretations of benign comments and events, it can be differentiated from psychotic disorders by the lack of persistent, well-developed delusions and other psychotic symptoms (eg, hallucinations, disorganized speech or behavior).

(Choice A) Antisocial personality disorder is characterized by a pattern of disregard for, and violation of, the rights of others.

(Choice B) Although onset of brief psychotic disorder (≥1 psychotic symptoms lasting ≥1 day and <1 month) is usually sudden and in the context of a stressor, this patient's pattern of pervasive distrust of others started well before his appendectomy and is more consistent with paranoid personality disorder.

(Choice C) This patient does not have persistent, fixed, false beliefs as found in delusional disorder, which is characterized by ≥1 delusions lasting ≥1 months in the absence of other psychotic symptoms.

(Choice D) Narcissistic personality disorder consists of a pervasive pattern of grandiosity, need for admiration, sense of entitlement, and lack of

have minimal interpersonal relationships due to doubts about others' intentions and concerns that personal information will be used against them.

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(Choice C) This patient does not have persistent, fixed, false beliefs as found in delusional disorder, which is characterized by ≥1 delusions lasting ≥1 months in the absence of other psychotic symptoms.

(Choice D) Narcissistic personality disorder consists of a pervasive pattern of grandiosity, need for admiration, sense of entitlement, and lack of empathy. Behaviors and interactions are often motivated by a need for attention and praise.

(Choice F) Individuals with schizoid personality disorder are aloof and socially detached but do not have overt paranoid ideation.

(Choice G) Schizotypal personality disorder is characterized by magical beliefs, social anxiety, eccentric behavior, and odd perceptual experiences.

Educational objective:
Individuals with paranoid personality disorder exhibit a lifelong pattern of pervasive suspicion and distrust. Unlike patients with psychotic disorders, they do not have fixed delusions and other psychotic symptoms.

References

- Mistrustful and misunderstood: a review of paranoid personality disorder.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Personality disorders
Subject	System	Topic

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A 27-year-old man leaves the men's room of a bar after smoking an unknown substance. He soon becomes disoriented and belligerent. The man displays uncoordinated, jerky movements of his extremities and assaults a bouncer who tries to calm him. When police and emergency medical services personnel arrive, he fights off 4 officers before being restrained and appears immune to pain. In the emergency department, the patient has visual hallucinations, cannot cooperate with the interview, and alternates between agitation and sedation. He is hypertensive and tachycardic, and examination shows vertical nystagmus. The patient does not cooperate with urine toxicology testing. Several hours later, during questioning by the emergency physician, he does not remember most of the preceding events. Which of the following is the primary mechanism of action of the drug most likely used by this patient?

A. Dopamine receptor antagonism

B. GABA-A receptor modulation

C. Mu-opioid receptor agonism

D. N-methyl-D-aspartate receptor antagonism

E. Serotonin receptor agonism

Submit

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- A. Dopamine receptor antagonism (4%)
- B. GABA-A receptor modulation (6%)
- C. Mu-opioid receptor agonism (7%)
- ✓ D. N-methyl-D-aspartate receptor antagonism (73%)
- E. Serotonin receptor agonism (6%)

Omitted
Correct answer
D

73%
Answered correctly

01 sec
Time Spent

02/08/2020
Last Updated

Explanation

This man likely experienced substance-induced psychosis from **phencyclidine (PCP) intoxication**. PCP is a hallucinogen that works primarily as an **N-methyl-D-aspartate (NMDA) glutamate receptor antagonist**. Although the exact mechanism is unknown, it is theorized that NMDA receptor hypofunction increases the risk of psychosis partially by causing dopamine dysregulation. Other NMDA receptor antagonists include

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Moderate amounts of PCP cause **dissociative symptoms**. Agitation, **hallucinations**, and **violent behavior** can occur with higher doses. Fatalities are often associated not with direct PCP intoxication but with related trauma due to combative behavior. In addition to belligerence, PCP is known to cause **loss of coordination**, horizontal and vertical **nystagmus**, and a constellation of cognitive symptoms that includes disorientation, poor judgment, and **memory loss**.

(Choice A) PCP is not a dopamine receptor antagonist. Dopamine receptor antagonism is the mechanism of action of most antipsychotics.

(Choice B) GABA-A receptor modulation is the mechanism of action of benzodiazepines, a drug class with sedative, antianxiety, and anticonvulsant properties. PCP may have some effect on GABA receptors, but this is not its primary mechanism of action.

(Choice C) Mu-opioid receptors are the primary site for the analgesic effects of opioids.

(Choice E) Serotonin receptor agonism is the mechanism of action of triptans, buspirone (an anxiolytic), and many psychedelic drugs (eg, LSD, psilocybin).

Educational objective:
Phencyclidine (PCP) is primarily an N-methyl-D-aspartate receptor antagonist, with lesser effects on the reuptake inhibition of biogenic amines and other receptors. It can have dissociative and anesthetic effects but may also cause psychosis and severe agitation, leading to violent trauma. Ataxia, horizontal and vertical nystagmus, and memory loss can also be present.

References

- Glutamatergic theories of schizophrenia.
- Glutamate neurocircuitry: theoretical underpinnings in schizophrenia.

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- Glutamate neurocircuitry: theoretical underpinnings in schizophrenia.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Phencyclidine
Subject	System	Topic

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A 28-year-old man is brought to the emergency department by his roommate, who is concerned about his change in behavior over the past 2 weeks. The roommate describes the patient as "a regular guy who is usually very responsible." Last week, the patient abruptly quit his job as a computer programmer and started placing large bets on an online gambling site because he was "sure to make millions." The roommate says that the patient has been staying up most nights scribbling notes for his autobiography on small scraps of paper. The patient says, "My new mission is to spread understanding." He denies any alcohol or drug use, which his roommate affirms. This patient is most likely to exhibit which of the following additional findings?

A. Flat affect
B. Low self-esteem
C. Poor hygiene
D. Pressured speech
E. Psychomotor slowing
F. Social withdrawal
G. Thought blocking

Submit

A 28-year-old man is brought to the emergency department by his roommate, who is concerned about his change in behavior over the past 2 weeks. The roommate describes the patient as "a regular guy who is usually very responsible." Last week, the patient abruptly quit his job as a computer programmer and started placing large bets on an online gambling site because he was "sure to make millions." The roommate says that the patient has been staying up most nights scribbling notes for his autobiography on small scraps of paper. The patient says, "My new mission is to spread understanding." He denies any alcohol or drug use, which his roommate affirms. This patient is most likely to exhibit which of the following additional findings?

- A. Flat affect (4%)
- B. Low self-esteem (0%)
- C. Poor hygiene (5%)
- ✓ D. Pressured speech (82%)
- E. Psychomotor slowing (0%)
- F. Social withdrawal (3%)
- G. Thought blocking (2%)

Omitted
Correct answer
D

82%
Answered correctly

02 secs
Time Spent

02/03/2020
Last Updated

Explanation

Manic episode

Explanation

Manic episode	
Clinical features	• ≥1 week of elevated or irritable mood & increased energy/activity • ≥3 of the following symptoms (4 if mood is irritable only) (**DIGFAST** mnemonic): ◦ **Distractibility** ◦ **Impulsivity**/indiscretion, risky behavior ◦ **Grandiosity** ◦ **Flight of ideas**/racing thoughts ◦ Increased **activity**/psychomotor agitation ◦ Decreased need for **sleep** ◦ **Talkativeness**/pressured speech
Severity	• Impaired psychosocial function • May have psychotic features (hallucinations, delusions) • May require hospitalization

This patient's **grandiose ideas** about his special mission, impulsive **risk-taking behavior**, and **decreased need for sleep** lasting ≥1 week are suggestive of a **manic episode** consistent with bipolar I disorder. Other features of mania include **elevated/euphoric/irritable mood**, increased energy, and hyperactivity. Increased production, volume, and rate of speech (ie, **pressured speech**) and a sense that one's thoughts are moving very quickly (ie, **racing thoughts**) are also common.

Diagnosis of bipolar I disorder requires ≥1 manic episodes, although most bipolar patients will experience both major depressive and manic episodes in their lifetime. Manic episodes can occur with or without psychotic features (eg, delusions, hallucinations). Pharmacotherapy for acute mania includes mood stabilizers such as lithium and valproate and second-generation antipsychotics (eg, risperidone).

(Choices A, C, and G) Flat affect (ie, reduced emotional expressiveness), decreased attention to personal hygiene, and thought blocking (ie, sudden inability to finish a thought) are findings typical of schizophrenia. In contrast, patients with bipolar disorder exhibit intense and labile affect

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(Choices A, C, and G) Flat affect (ie, reduced emotional expressiveness), decreased attention to personal hygiene, and thought blocking (ie, sudden inability to finish a thought) are findings typical of schizophrenia. In contrast, patients with bipolar disorder exhibit intense and labile affect, increased thought productivity, and pressured speech. These patients may wear garish clothing and makeup but typically do not neglect their hygiene.

(Choices B, E, and F) Low self-esteem, psychomotor slowing (ie, slow speech and movements), and social withdrawal are more typical of a major depressive episode. Patients in a manic episode are typically grandiose or overconfident, physically restless and hyperactive, and expansive (eg, overly friendly and eager to talk to strangers).

Educational objective:
Manic episodes are characterized by euphoric/irritable mood, impulsivity, hyperactivity, decreased need for sleep, pressured speech, racing thoughts, and grandiosity. They may occur with or without psychotic features.

References

- Bipolar disorder.
- The diagnosis and management of bipolar I and II disorders: clinical practice update.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Bipolar disorder
Subject	System	Topic

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A 21-year-old woman, gravida 1 para 0, comes to the office for a prenatal visit at 16 weeks gestation. The patient, who has not gained weight since her last visit 4 weeks ago, has occasional nausea with vomiting twice a week. She has little appetite, which she attributes to mild indigestion, and her food consumption has decreased. However, the patient craves ice and has been consuming it throughout the day for the last few months. Medications include daily prenatal vitamins. The patient was prescribed twice-daily iron for anemia but does not take it because it causes constipation. She has no diarrhea, dysuria, chills, or fever. She does not use tobacco. Uterine fundus is consistent with a 16-week pregnancy. Fetal heart tone is 140-149/min. The patient's vital signs are within normal limits. Which of the following is the most likely diagnosis?

A. Anorexia nervosa
B. Avoidant/restrictive food intake disorder
C. Bulimia nervosa
D. Hyperemesis gravidarum
E. Normal pregnancy craving
F. Pica

Submit

A 21-year-old woman, gravida 1 para 0, comes to the office for a prenatal visit at 16 weeks gestation. The patient, who has not gained weight since her last visit 4 weeks ago, has occasional nausea with vomiting twice a week. She has little appetite, which she attributes to mild indigestion, and her food consumption has decreased. However, the patient craves ice and has been consuming it throughout the day for the last few months. Medications include daily prenatal vitamins. The patient was prescribed twice-daily iron for anemia but does not take it because it causes constipation. She has no diarrhea, dysuria, chills, or fever. She does not use tobacco. Uterine fundus is consistent with a 16-week pregnancy. Fetal heart tone is 140-149/min. The patient's vital signs are within normal limits. Which of the following is the most likely diagnosis?

- A. Anorexia nervosa (1%)
- B. Avoidant/restrictive food intake disorder (6%)
- C. Bulimia nervosa (0%)
- D. Hyperemesis gravidarum (5%)
- E. Normal pregnancy craving (13%)
- ✓ F. Pica (71%)

Omitted
Correct answer
F

71%
Answered correctly

12 secs
Time Spent

03/01/2020
Last Updated

Explanation

Pica is the compulsive **consumption of nonstaple food** or non-nutritive substance for ≥1 month. It is most commonly seen in **pregnant women** and schoolchildren. The ingested substance is not a culturally accepted food source, and the consumption is not appropriate to the person's developmental level. Although the cause of pica is unclear, it is often, but not always, associated with **nutritional deficiencies**, including iron and

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(Choice A) Patients with anorexia nervosa restrict their energy intake to maintain a body weight below a minimal level for age, sex, and developmental trajectory (typical BMI <18.5 kg/m^2). Anorexia nervosa is also associated with a distorted body image and intense fear of weight gain, which this woman does not have.

(Choice B) Avoidant/restrictive food intake disorder is the avoidance of eating due to unpleasant sensations (eg, taste, texture, smell) associated with a particular foodstuff or fear of the consequences of eating (eg, fear of choking or vomiting).

(Choice C) Bulimia nervosa involves episodes of binge eating followed by behaviors to compensate for weight gain (eg, vomiting, fasting, use of diuretics and/or laxatives). These episodes occur at least once a week for 3 months.

(Choice D) Hyperemesis gravidarum is a severe form of persistent nausea and vomiting in pregnancy and can lead to weight loss and electrolyte imbalances. This patient has only mild nausea and vomiting, consistent with normal morning sickness.

(Choice E) In cravings of normal pregnancy, the patient desires nutritive food items. The cravings in pica are for nonstaple food substances and tend to be much harder to resist.

Educational objective:
Pica is the compulsive consumption of a non-nutritive and/or nonstaple food. It is common in pregnancy and is often associated with iron deficiency anemia and other forms of nutritional deficiency.

References

- A meta-analysis of the worldwide prevalence of pica during pregnancy and the postpartum period.
- A meta-analysis of pica and micronutrient status.

Omitted
Correct answer
F

71%
Answered correctly

12 secs
Time Spent

03/01/2020
Last Updated

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Pica is the compulsive consumption of a non-nutritive and/or nonstaple food. It is common in pregnancy and is often associated with iron deficiency anemia and other forms of nutritional deficiency.

References

- A meta-analysis of the worldwide prevalence of pica during pregnancy and the postpartum period.
- A meta-analysis of pica and micronutrient status.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Iron deficiency anemia
Subject	System	Topic

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A resident physician is finishing up her shift when she receives a page that reads, "Patient in Room 121 asking to leave." The patient was admitted 2 hours ago for worsening dyspnea. On entering the room, the resident attempts to engage in a discussion about why the patient is requesting to leave. In response, the patient pulls out his nasal cannula and breathlessly says, "You don't know anything; you're not even a real doctor!" The resident is reminded of her father, who has frequently belittled her accomplishments. She angrily informs the patient, "You can't leave and I'm ordering haloperidol to calm you down." Which of the following best explains the resident's response to the patient?

A. Countertransference
B. Passive aggression
C. Projection
D. Reaction formation
E. Regression
F. Transference

Submit

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- ✓ A. Countertransference (64%)
- B. Passive aggression (2%)
- C. Projection (10%)
- D. Reaction formation (3%)
- E. Regression (1%)
- F. Transference (17%)

Omitted
Correct answer
A

64%
Answered correctly

10 secs
Time Spent

03/20/2020
Last Updated

Explanation

The resident's response to the patient is illustrative of **countertransference**, which consists of the physician or therapist's conscious and unconscious **reaction toward a patient** (eg, attitudes, thoughts, feelings, behaviors) that is **based on past personal relationships**. Countertransference reactions can be positive (eg, physician takes extra time with a patient who resembles a beloved grandmother) or negative (eg, physician avoids a patient who resembles a critical parent).

The resident's response to the patient is illustrative of **countertransference**, which consists of the physician or therapist's conscious and unconscious **reaction toward a patient** (eg, attitudes, thoughts, feelings, behaviors) that is **based on past personal relationships**. Countertransference reactions can be positive (eg, physician takes extra time with a patient who resembles a beloved grandmother) or negative (eg, physician avoids a patient who resembles a critical parent).

Countertransference can **interfere with medical judgment**. In this case, the resident's negative emotions toward her father are activated when the patient dismisses her training and credentials. The resident acts on her negative countertransference reaction and adopts an inappropriately authoritarian approach by terminating the conversation and ordering a medication. Awareness of countertransference may prevent responses and behaviors (eg, yelling at a patient, ordering unnecessary medications/restraints, cutting an interview short) that could be harmful to patient care.

(Choice B) Passive aggression is a defense mechanism in which anger is expressed in a nonconfrontational manner. Examples of passive aggressive behaviors include sarcasm, procrastination, and purposeful inefficiency.

(Choice C) Projection is a defense mechanism that involves misattributing one's own unacceptable feelings to another person (eg, a woman who is angry with her mother accuses her mother of being angry with her).

(Choice D) Reaction formation is a defense mechanism in which uncomfortable feelings are unconsciously transformed into their extreme opposites (eg, if this resident was excessively gracious to the patient to defend against underlying anger).

(Choice E) Regression is a defense mechanism that involves returning to an earlier level of functioning to alleviate psychological distress (eg, a child starts sucking his thumb after a sibling is born).

(Choice F) Transference refers to the redirection of a patient's emotions from a significant person in the past to that patient's current physician or therapist. It may explain some patients' emotional responses to their physicians (eg, an elderly patient who feels an immediate sense of comfort and familiarity with a physician who resembles her daughter). Transference is distinguished from countertransference by describing the patient's reaction to the provider, whereas countertransference refers to the provider's reaction to the patient.

Educational objective:
Countertransference consists of a provider's response (eg, attitudes, thoughts, feelings, behaviors) toward a patient based on past personal relationships. Countertransference can be positive or negative, conscious or unconscious; if unrecognized, it may have detrimental effects on patient care.

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References

- Shift, interrupted: strategies for managing difficult patients including those with personality disorders and somatic symptoms in the emergency department.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Defense mechanisms
Subject	System	Topic

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A 62-year-old woman comes to the office for a checkup. Her husband died 5 months ago in a biking accident, which she witnessed. She has little appetite, resulting in weight loss of 3.17 kg (7 lb), and tends to wake up two hours before her alarm clock rings. The patient feels overwhelmed at having to manage the household finances, saying, "My husband always took care of the bills so I wouldn't have to worry." She avoids cycling, a hobby she shared with her husband, but continues to volunteer at a children's hospital. The patient has no nightmares or suicidal thoughts. During the visit, she tears up intermittently but smiles when sharing a memory of a vacation she took with her husband. Which of the following is the best explanation for this patient's condition?

- A. Dependent personality disorder
- B. Major depressive disorder
- C. Normal grief
- D. Persistent complex bereavement disorder
- E. Persistent depressive disorder
- F. Post-traumatic stress disorder

Submit

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- A. Dependent personality disorder (0%)
- B. Major depressive disorder (2%)
- ✓ C. Normal grief (89%)
- D. Persistent complex bereavement disorder (3%)
- E. Persistent depressive disorder (0%)
- F. Post-traumatic stress disorder (2%)

Omitted
Correct answer
C

89%
Answered correctly

02 secs
Time Spent

01/25/2020
Last Updated

Explanation

Major depressive episode & grief reaction	
Major depressive episode	Grief reaction

A 62-year-old woman comes to the office for a checkup. Her husband died 5 months ago in a biking accident, which she witnessed. She has little appetite, resulting in weight loss of 3.17 kg (7 lb), and tends to wake up two hours before her alarm clock rings. The patient feels overwhelmed at having to manage the household finances, saying, "My husband always took care of the bills so I wouldn't have to worry." She avoids cycling, a hobby she shared with her husband, but continues to volunteer at a children's hospital. The patient has no nightmares or suicidal thoughts. During the visit, she tears up intermittently but smiles when sharing a memory of a vacation she took with her husband. Which of the following is the best explanation for this patient's condition?

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Omitted
Correct answer
C

89%
Answered correctly

02 secs
Time Spent

01/25/2020
Last Updated

Explanation

Major depressive episode & grief reaction	
Major depressive episode	Grief reaction

Major depressive episode & grief reaction	
Major depressive episode	**Grief reaction**
• ≥2 weeks; ≥5 of 9 symptoms: low mood, anhedonia, sleep disturbance, appetite change, low energy, psychomotor changes, guilt/worthlessness, concentration difficulty, suicidal ideation • May occur in response to a variety of stressors, including loss of a loved one • Marked social & occupational dysfunction • Suicidality related to hopelessness & worthlessness	• Normal reaction to loss (bereavement) • Sadness more specific to thoughts of the deceased • "Waves" of grief at reminders • Self-esteem usually preserved • Functional decline less severe • Thoughts of dying involve wish to join the deceased; active suicidality uncommon • Intensity decreases over time

This patient's sadness, insomnia, and decreased appetite are consistent with a **normal grief reaction** precipitated by the loss of a loved one (bereavement). In a normal grief reaction, the sadness revolves around **feelings of loss** and typically occurs in "waves" **intermixed** with **positive memories** of the deceased. For most, the natural mourning process lasts 6-12 months and is followed by the integration of grief, in which the individual continues to feel transient but less pronounced sadness, and life plans/routines have adapted to living without the deceased.

Normal grief can **resemble** a **major depressive episode** as both may include intense sadness, rumination about the loss, insomnia, poor appetite, and weight loss. However, this woman's positive memories about her husband, ability to continue volunteering, and lack of other depressive symptoms (eg, hopelessness, feelings of low self-worth, guilt, suicidal ideation) make major depression less likely **(Choice B)**. A major depressive disorder can be diagnosed during a grief reaction if a sufficient number and severity of depressive symptoms are present.

(Choice A) Dependent personality disorder is diagnosed when there is a lifelong pattern of excessive need to be taken care of, leading to submissive, clingy behavior and fears of separation.

(Choice D) Persistent complex bereavement disorder (also known as complicated grief) is characterized by prolonged grief for >12 months, difficulty accepting the death, persistent yearning for the deceased, and inability to reengage with life. This patient's symptom duration is within the range seen in normal grief and she is showing signs of adapting to living without the deceased.

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(Choice E) Persistent depressive disorder is a chronic depression that persists for at least 2 years.

(Choice F) Although this patient witnessed her husband's accident and avoids cycling, her symptoms are not consistent with post-traumatic stress disorder as she is not re-experiencing the event (eg, nightmares, flashbacks) or having symptoms of trauma-related reactivity (eg, hypervigilance, heightened startle response).

Educational objective:
Normal grief presents with symptoms similar to those of a major depressive episode. However, in normal grief, pervasive anhedonia, worthlessness, and suicidality are not present.

References

- Bereavement: course, consequences, and care.
- The removal of the bereavement exclusion in the DSM-5: exploring the evidence.

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A 79-year-old man is brought to the office by his wife for evaluation of memory impairment. The patient is a recently retired professor who began having memory problems a month ago. He has been forgetting to take his medication, has had difficulty remembering the names of his grandchildren, and has neglected to turn off the stove on more than one occasion. The patient used to enjoy reading and playing with his grandchildren but has recently stopped doing both of these activities. He also has difficulty staying asleep, low appetite, and decreased energy. The patient has hypertension and type 2 diabetes, for which he takes medications. He has a family history of Alzheimer disease. The patient says, "I just feel so worthless since retiring." Temperature is 36.7 C (98.1 F), blood pressure is 119/78 mm Hg, pulse is 74/min, and respirations are 14/min. Neurological examination reveals no focal deficits. Montreal Cognitive Assessment score is 23 (normal: ≥26/30). Which of the following is the most likely diagnosis?

- A. Alzheimer disease
- B. Dementia with Lewy bodies
- C. Depression-related cognitive impairment
- D. Frontotemporal dementia
- E. Normal aging
- F. Vascular dementia

Submit

A 79-year-old man is brought to the office by his wife for evaluation of memory impairment. The patient is a recently retired professor who began having memory problems a month ago. He has been forgetting to take his medication, has had difficulty remembering the names of his grandchildren, and has neglected to turn off the stove on more than one occasion. The patient used to enjoy reading and playing with his grandchildren but has recently stopped doing both of these activities. He also has difficulty staying asleep, low appetite, and decreased energy. The patient has hypertension and type 2 diabetes, for which he takes medications. He has a family history of Alzheimer disease. The patient says, "I just feel so worthless since retiring." Temperature is 36.7 C (98.1 F), blood pressure is 119/78 mm Hg, pulse is 74/min, and respirations are 14/min. Neurological examination reveals no focal deficits. Montreal Cognitive Assessment score is 23 (normal: ≥26/30). Which of the following is the most likely diagnosis?

- A. Alzheimer disease (14%)
- B. Dementia with Lewy bodies (1%)
- ✓ C. Depression-related cognitive impairment (75%)
- D. Frontotemporal dementia (1%)
- E. Normal aging (4%)
- F. Vascular dementia (2%)

Omitted
Correct answer
C

75%
Answered correctly

01 sec
Time Spent

02/19/2020
Last Updated

Explanation

Cognitive impairment in elderly patients	
Normal aging	• Slight decrease in fluid intelligence (ability to process new information quickly) • **Normal functioning** in all activities of daily living
Mild neurocognitive disorder (mild cognitive impairment)	• Mild decline in ≥1 cognitive domains • Normal functioning in all activities of daily living with compensation
Major neurocognitive disorder (dementia)	• Significant decline in ≥1 cognitive domains • **Irreversible** global cognitive impairment • Marked functional impairment • Chronic & progressive, months to years
Major depression	• **Reversible** mild-moderate cognitive impairment • Features of **depression** (mood, interest, energy) • Episodic, weeks to months

Cognitive impairment is a common symptom of **late-life depression**. Depression-related cognitive impairment (previously termed pseudodementia) refers to a syndrome of reversible cognitive impairment that can **mimic mild cognitive impairment** or dementia. This patient's acute development of cognitive impairment **coincident with depressive symptoms** of sleep disturbance, decreased appetite, low energy, feelings of worthlessness, and loss of interest is consistent with major depressive disorder (MDD).

Treatment of depression-related cognitive impairment consists of treating the underlying MDD with psychotherapy and/or pharmacotherapy. The cognitive and mood symptoms should **resolve with adequate treatment** of MDD. In contrast, the cognitive deficits in patients with dementia are irreversible and will gradually worsen despite treatment.

(Choices A, B, D, and F) Subtypes of dementia include Alzheimer disease (prominent early memory impairment), dementia with Lewy bodies (visual hallucinations, parkinsonism), frontotemporal dementia (early personality changes), and vascular dementia (stepwise neurological deficits,cerebrovascular disease). However, this patient's acute cognitive impairment (~1 month) in conjunction with his depressive symptoms makes MDD a more likely diagnosis.

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(Choice E) Normal age-related cognitive changes may include difficulty remembering names and slowed processing speed. This patient's objective evidence of more global cognitive impairment on cognitive testing (abnormal Montreal Cognitive Assessment score) is not normal and represents depression-related cognitive impairment.

Educational objective:
Depression-related cognitive impairment refers to cognitive impairment that occurs in the context of major depressive disorder (MDD), which may be mistaken for mild cognitive impairment or dementia.

References

- A common challenge in older adults: classification, overlap, and therapy of depression and dementia.
- Depression and cognition in the elderly.
- Diagnosis and treatment of depression and cognitive impairment in late life.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Depression
Subject	System	Topic

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(Choice E) Normal age-r
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Educational objective:
Depression-related cognit
be mistaken for mild cogn

References

- A common challenge i
- Depression and cogni
- Diagnosis and treatme

Behavioral science
Subject

Exhibit Display

Major depressive disorder	
Diagnosis	• ≥5 of the following symptoms lasting ≥2 weeks (at least 1 symptom must be either depressed mood or loss of interest/pleasure): ◦ Depressed mood ◦ Loss of interest or pleasure ◦ Change in appetite or weight ◦ Insomnia or hypersomnia ◦ Psychomotor retardation or agitation ◦ Low energy ◦ Poor concentration or indecisiveness ◦ Thoughts of worthlessness or inappropriate guilt ◦ Recurrent thoughts of death or suicide • No history of mania or hypomania • Not due to substances or another medical condition
Treatment	• Psychotherapy • Antidepressant medication

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A 26-year-old woman comes to the emergency department to report that her life is in danger. The patient believes that transmitters inserted in her bedroom walls are broadcasting her thoughts to a central government agency that is now plotting to kill her. On mental status examination, she is fearful and paces the examining room. The patient makes poor eye contact with the examiner, and her responses are interrupted by frequent pauses during which she appears to talk back to a person who is not present. She has no medical history. The patient smokes a pack of cigarettes daily and does not use illicit drugs. Physical examination shows a thin, disheveled young woman but no abnormalities. She is hospitalized, improves with medication over the course of 2 weeks, and is discharged on olanzapine. At this patient's 3-month checkup, which of the following studies should be obtained?

A. Blood urea nitrogen and creatinine
B. Complete blood count
C. Electrocardiogram
D. Fasting glucose and lipid panel
E. Prolactin level
F. Thyroid function tests

Submit

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- A. Blood urea nitrogen and creatinine (4%)
- B. Complete blood count (19%)
- C. Electrocardiogram (4%)
- ✓ D. Fasting glucose and lipid panel (58%)
- E. Prolactin level (9%)
- F. Thyroid function tests (3%)

Omitted
Correct answer
D

58%
Answered correctly

02 secs
Time Spent

01/24/2020
Last Updated

Explanation

Metabolic effects of second-generation antipsychotics

Metabolic effects of second-generation antipsychotics	
Metabolic syndrome	• Weight gain • Dyslipidemia • Hyperglycemia (including new-onset diabetes)
Highest-risk drugs	• Clozapine • Olanzapine
Monitoring guidelines	Baseline & regular follow-up • BMI • Fasting glucose & lipids • Blood pressure • Waist circumference

Olanzapine is a **second-generation antipsychotic** (SGA) medication used to treat psychotic and mood disorders. SGAs are commonly used as first-line agents due to their lower risk of extrapyramidal side effects compared to first-generation antipsychotics. As a class, SGAs are associated with **metabolic adverse effects** (eg, weight gain, dyslipidemia, hyperglycemia, increased risk of diabetes) to varying degrees. Among the SGAs, **olanzapine** and **clozapine** carry the **greatest metabolic syndrome risk**. Patients taking SGAs require routine monitoring of metabolic parameters, including weight, waist circumference, blood pressure, **fasting glucose**, and **lipid profile**.

(Choices A and F) Blood urea nitrogen, creatinine, and thyroid function tests should be routinely monitored in patients taking the mood stabilizer lithium due to its potential to cause hypothyroidism and impair renal function. Treatment with olanzapine does not require routine monitoring of thyroid or renal function.

(Choice B) Olanzapine rarely causes neutropenia, and routine monitoring of complete blood counts is not required unless the patient has a history of drug-induced or baseline neutropenia. Clozapine is the only antipsychotic that requires regular monitoring of the absolute neutrophil count due to the drug's 1% risk of agranulocytosis.

(Choice C) Routine ECG monitoring is not required with antipsychotic treatment unless the patient has known pre-existing cardiovascular risk factors (eg, long QT syndrome). Among SGAs, ziprasidone is most often associated with QT prolongation.

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	• Waist circumference

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(Choice E) Although antipsychotics can cause prolactin elevation due to D2 receptor antagonism in the tuberoinfundibular pathway, prolactin levels are not routinely monitored unless the patient has symptoms of prolactin dysfunction (eg, galactorrhea, sexual impairment). Among SGAs, risperidone has been associated with a greater risk of prolactin elevation.

Educational objective:
As a class, second-generation antipsychotics are associated with metabolic adverse effects (eg, weight gain, dyslipidemia, hyperglycemia, increased risk of diabetes). Within the class, olanzapine and clozapine carry the greatest risk.

References

- Clinical monitoring and management of the metabolic syndrome in patients receiving atypical antipsychotic medications.
- Second-generation antipsychotics and metabolic side effects: a systematic review of population-based studies.

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An 18-year-old woman comes to the office due to low energy, decreased appetite, insomnia, poor concentration, and decreased interest in her daily activities. She has lost 3.6 kg (8 lb) over the last month. The patient has no psychiatric history and has no current or significant medical illnesses. Physical examination and laboratory evaluation are unremarkable. Treatment with medication is initiated. Three weeks later, the patient is brought to the emergency department by her mother for not sleeping at all for 3 nights. The patient reports that she does not feel tired despite lack of sleep. She spent a large amount of money on plane tickets and plans to travel around the world to promote world peace. Her mother adds that she herself has suffered from severe mood swings in the past. This patient was most likely started on which of the following medications 3 weeks ago?

A. Carbamazepine
B. Lamotrigine
C. Lithium
D. Olanzapine
E. Sertraline
F. Valproate

Submit

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A. Carbamazepine (1%)
B. Lamotrigine (2%)
C. Lithium (16%)
D. Olanzapine (4%)
✓ E. Sertraline (72%)
F. Valproate (2%)

Omitted
Correct answer
E

72%
Answered correctly

02 secs
Time Spent

03/08/2020
Last Updated

Explanation

This patient initially had symptoms of major depressive disorder (ie, loss of interest, low energy, weight loss, insomnia, impaired concentration) and was most likely prescribed an antidepressant (eg, sertraline) as first-line therapy. Three weeks later in the emergency department, she

This patient initially had symptoms of major depressive disorder (ie, loss of interest, low energy, weight loss, insomnia, impaired concentration) and was most likely prescribed an antidepressant (eg, sertraline) as first-line therapy. Three weeks later in the emergency department, she exhibits symptoms of mania (ie, decreased need for sleep, increased energy, reckless spending, and grandiosity). All **antidepressants** carry a **risk of inducing mania** in susceptible patients. Antidepressant-induced mania can occur early in the first few days or weeks of starting the medication (even before the time frame normally expected for an antidepressant to take effect).

In this case, the mother's history of severe mood swings suggests a **family history of bipolar disorder** that places the patient at increased risk for developing this disorder. If a patient becomes manic or hypomanic on antidepressant therapy, the antidepressant should be stopped.

(Choices A, C, and F) Carbamazepine, lithium, and valproate are mood stabilizers used in acute episodes and maintenance treatment of bipolar disorder. This patient presented with depression, with no known history of bipolar disorder at that time. A mood stabilizer would not have been the initial first-line treatment.

(Choice B) Lamotrigine, an anticonvulsant mood stabilizer, is effective in the depressed phase of bipolar disorder and is also used in the maintenance phase. Its use would have been appropriate if the patient had a known bipolar disorder at initial presentation. Lamotrigine is associated with a risk of benign rash that can progress to serious rash (including Stevens-Johnson syndrome) in rare cases.

(Choice D) Olanzapine is a second-generation antipsychotic with mood-stabilizing properties that can be used in bipolar disorder. It is associated with weight gain and metabolic side effects.

Educational objective:
Antidepressant monotherapy can induce mania in susceptible patients, especially those with unrecognized bipolar disorder.

References

- Antidepressant-associated mood-switching and transition from unipolar major depression to bipolar disorder: a review.
- Risk of manic switch associated with antidepressant therapy in pediatric bipolar depression.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Bipolar disorder
Subject	System	Topic

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A 26-year-old man is brought to the emergency department by police after assaulting customers in a restaurant. He explains that he meant no harm and was just trying to talk to people and touch them to "heal their pain." The patient has been up all night for the past 10 days devising a global strategy to end world hunger and has written a hundred-page manifesto documenting his ideas. Over this same period, he began hearing a voice telling him that he is "God's true son" and will need to sacrifice his life. The patient has no psychiatric or medical history. He drinks alcohol socially but does not use illicit drugs. Physical examination is normal. On mental status examination, the patient paces continuously. His mood is very irritable, and his speech is loud, rapid, and difficult to interrupt. Which of the following is the most likely diagnosis in this patient?

A. Bipolar I disorder with psychotic features
B. Bipolar II disorder
C. Brief psychotic disorder
D. Delusional disorder
E. Schizophreniform disorder
F. Substance-induced psychotic disorder

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Submit

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- ✓ A. Bipolar I disorder with psychotic features (52%)
- B. Bipolar II disorder (1%)
- C. Brief psychotic disorder (25%)
- D. Delusional disorder (5%)
- E. Schizophreniform disorder (13%)
- F. Substance-induced psychotic disorder (1%)

Omitted
Correct answer
A

52%
Answered correctly

26 secs
Time Spent

01/10/2020
Last Updated

Explanation

Manic episode	
	• ≥1 week of elevated or irritable mood & increased energy/activity

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Manic episode	
Clinical features	• ≥1 week of elevated or irritable mood & increased energy/activity • ≥3 of the following symptoms (4 if mood is irritable only) (**DIGFAST** mnemonic): ◦ **Distractibility** ◦ **Impulsivity**/indiscretion, risky behavior ◦ **Grandiosity** ◦ **Flight of ideas**/racing thoughts ◦ Increased **activity**/psychomotor agitation ◦ Decreased need for **sleep** ◦ **Talkativeness**/pressured speech
Severity	• Impaired psychosocial function • May have psychotic features (hallucinations, delusions) • May require hospitalization

This patient's symptoms of **irritable mood**, **impulsivity**, **hyperactivity**, **pressured speech**, **decreased need for sleep**, and **grandiose delusions** lasting ≥1 week meet the criteria for a **manic episode** (Table). Although an elevated mood typifies a manic episode, an irritable mood is commonly seen. Patients with ≥1 manic episodes are diagnosed with **bipolar I disorder**; although most bipolar I patients will experience both major depressive and manic episodes, depressive episodes are not required for diagnosis of bipolar I. Manic episodes can occur **with or without psychotic features** (eg, delusions, hallucinations).

Bipolar disorder with psychotic features may be differentiated from a primary psychotic disorder (eg, schizoaffective disorder bipolar type) based on the temporal relationship between the mood disturbance and the psychosis. In psychotic disorders, psychotic symptoms must persist in the absence of mood symptoms. This patient's psychosis has occurred only in the presence of severe manic symptoms, making bipolar I disorder the more likely diagnosis.

(Choice B) Bipolar II disorder involves hypomanic episodes (less severe than mania and without psychotic features) and major depressive

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(Choice B) Bipolar II disorder involves hypomanic episodes (less severe than mania and without psychotic features) and major depressive episodes.

(Choice C) Brief psychotic disorder is characterized by acute onset of ≥1 psychotic symptoms lasting ≥1 days but <1 month, with eventual complete resolution. The diagnosis cannot be made when psychotic symptoms occur only in the context of a manic episode, as in this patient.

(Choice D) Delusional disorder is characterized by ≥1 delusions in the absence of other psychotic symptoms. Functioning may be normal apart from the direct impact of the delusion. Mood symptoms, if present, are not prominent.

(Choice E) In schizophreniform disorder, symptoms of schizophrenia (delusions, hallucinations, disorganized speech and behavior, negative symptoms) are present for >1 month but <6 months. This patient's psychotic symptoms have occurred only in the context of a manic episode and have been present for <1 month.

(Choice F) Substance-induced disorders should be ruled out prior to diagnosing primary psychiatric illness. The extent of this patient's alcohol use would be unlikely to cause his current symptoms. Cocaine and stimulants are more likely to induce manic symptoms.

Educational objective:
Bipolar I disorder is diagnosed in patients with ≥1 episodes of mania. Manic episodes are characterized by elevated/irritable mood, impulsivity, hyperactivity, decreased need for sleep, pressured speech, and grandiosity and may occur with psychotic features.

References

- Bipolar disorder.

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References

- Bipolar disorder.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Bipolar disorder
Subject	System	Topic

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A 48-year-old man begins psychotherapy due to depression and escalating conflicts with his boss. He makes progress in the therapy sessions and reports feeling less depressed. The patient has also gained insight into how his father was rarely available to him while growing up and recently told his father, "I am angry that you were never there for me." The following week, the psychiatrist unexpectedly cancels a session to attend to an emergency. At the next appointment, the patient says, "I feel as if you are not interested in listening to me, like I am not your priority." Which of the following is the most likely explanation of this patient's attitude toward his psychiatrist?

A. Acting out
B. Displacement
C. Projection
D. Reaction formation
E. Regression
F. Transference

Submit

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- A. Acting out (2%)
- B. Displacement (22%)
- C. Projection (14%)
- D. Reaction formation (3%)
- E. Regression (1%)
- ✓ F. Transference (55%)

Omitted
Correct answer
F

55%
Answered correctly

01 sec
Time Spent

07/06/2020
Last Updated

Explanation

Transference is the unconscious **shifting** of **emotions** or desires associated with a **person from the past** to another **person in the present**. Transference emotions often originate from feelings toward early significant figures, particularly parents. When the psychiatrist cancels the session unexpectedly, the patient's negative childhood experiences with his unavailable father are activated and unconsciously brought into the present with the psychiatrist.

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D. Reaction formation (3%)

E. Regression (1%)

✓ F. Transference (55%)

Omitted
Correct answer
F

55%
Answered correctly

01 sec
Time Spent

07/06/2020
Last Updated

Explanation

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Transference can be positive or negative and frequently affects doctor-patient relationships (both psychiatric and nonpsychiatric). Positive transference plays a role in patients trusting their physicians as many patients have a positive expectation that doctors are compassionate caregivers (similar to their parents). Patients who were abused as children sometimes have difficulty seeking care or complying with the care they receive due to negative expectations of being taken advantage of or being harmed by a caregiving figure.

(Choice A) In acting out, unconscious feelings or impulses are expressed through actions (eg, if this patient had impulsively broken items in the psychiatrist's office due to rage at his perceived abandonment).

(Choice B) In displacement, a person expresses unacceptable feelings intended for one person to a more neutral person or object (eg, if this patient did not express his anger to his father and instead berated the psychiatrist). Because the patient disclosed his anger to his father directly, he would not be using displacement.

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(Choice C) Projection involves misattributing one's own unacceptable feelings to another person (eg, if the patient were unable to acknowledge his disappointment toward his psychiatrist about canceling and instead perceived his psychiatrist as being upset with him).

(Choice D) In reaction formation, uncomfortable feelings are transformed into their opposites (eg, if this patient expressed deep appreciation for the psychiatrist's care rather than acknowledging his disappointment).

(Choice E) Regression is a defense mechanism in which an individual returns to an earlier level of functioning to alleviate psychological distress (eg, if the patient sulked and refused to speak rather than maturely discussing his feelings with the psychiatrist).

Educational objective:
Transference is the unconscious shifting of emotions associated with a significant person from one's past to a person in the present.

References

- Crossing theoretical lines: the role and effect of transference in nonanalytic psychotherapies.
- How should clinicians respond to transference reactions with cancer patients?

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- Crossing theoretical lines: the role and effect of transference in nonanalytic psychotherapies.
- How should clinicians respond to transference reactions with cancer patients?
- Transference, transference interpretations, and transference-focused psychotherapies.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Defense mechanisms
Subject	System	Topic

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A 35-year-old man comes to the office due to a lack of sexual interest. He says, "I started seeing this woman 9 months ago and am really attracted to her. We get along well and things are great, but I just don't want to have sex with her anymore." On further questioning, the patient reluctantly admits that whenever they have intercourse he has an orgasm in less than a minute and finds this very embarrassing. He does not have the same problem when he masturbates. He says, "I'm worried that my girlfriend will leave me, and it's really affecting my self-esteem." The patient has no other concerns. His other medical conditions include type 1 diabetes mellitus, chronic insomnia, and a history of major depression. His medications include insulin glargine, short-acting insulin, and trazodone. He does not use illicit substances. Vital signs are within normal limits. Laboratory results are significant for hemoglobin A1c of 7% and fasting glucose of 130 mg/dL. Which of the following is the most likely diagnosis?

A. Erectile disorder
B. Male hypoactive sexual desire disorder
C. Premature ejaculation
D. Sexual dysfunction due to diabetes
E. Sexual dysfunction due to major depressive disorder
F. Substance/medication-induced sexual dysfunction

Submit

A 35-year-old man comes to the office due to a lack of sexual interest. He says, "I started seeing this woman 9 months ago and am really attracted to her. We get along well and things are great, but I just don't want to have sex with her anymore." On further questioning, the patient reluctantly admits that whenever they have intercourse he has an orgasm in less than a minute and finds this very embarrassing. He does not have the same problem when he masturbates. He says, "I'm worried that my girlfriend will leave me, and it's really affecting my self-esteem." The patient has no other concerns. His other medical conditions include type 1 diabetes mellitus, chronic insomnia, and a history of major depression. His medications include insulin glargine, short-acting insulin, and trazodone. He does not use illicit substances. Vital signs are within normal limits. Laboratory results are significant for hemoglobin A1c of 7% and fasting glucose of 130 mg/dL. Which of the following is the most likely diagnosis?

- A. Erectile disorder (1%)
- B. Male hypoactive sexual desire disorder (2%)
- ✓ C. Premature ejaculation (66%)
- D. Sexual dysfunction due to diabetes (3%)
- E. Sexual dysfunction due to major depressive disorder (4%)
- F. Substance/medication-induced sexual dysfunction (21%)

Omitted
Correct answer
C

66%
Answered correctly

02 secs
Time Spent

02/12/2020
Last Updated

Explanation

Evaluation of sexual dysfunction requires ruling out medical conditions and substance use, as well as obtaining a history of psychosocial

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Evaluation of sexual dysfunction requires ruling out medical conditions and substance use, as well as obtaining a history of psychosocial stressors, including stressors in the relationship itself. This patient has features of **premature ejaculation**, characterized by unwanted episodes of early ejaculation accompanied by a sense of lack of control. Although concern over the time to ejaculation is common, only an estimated 4% of men will meet diagnostic criteria (ejaculation **within one minute** of penetration, occurring most of the time **for at least 6 months**). The diagnostic criteria for premature ejaculation are based on ejaculation during partnered sexual activity, therefore a normal time to ejaculation during masturbation does not negate this diagnosis.

(Choice A) Erectile disorder is characterized by a persistent inability to attain or sustain an erection.

(Choice B) The symptom reported initially was a lack of sexual interest. However, on further questioning, it was found to be related to his embarrassment over premature ejaculation rather than to a pervasive lack of desire. It is common for men with premature ejaculation to develop anxiety and resultant aversion to sexual intercourse.

(Choice D) Medical conditions, including diabetes, that affect nerve function or blood flow to the pelvic tissue tend to result in erectile dysfunction rather than premature ejaculation. Medical conditions linked to premature ejaculation include prostatitis and thyroid disease.

(Choice E) Sexual dysfunction may occur in the context of psychiatric conditions, such as depression and anxiety. Apart from the distress secondary to his ejaculatory disorder, this patient reports no depressive symptoms.

(Choice F) Trazodone is a serotonin modulator used primarily for the treatment of insomnia. It may cause priapism (ie, persistent erection), but it does not cause premature ejaculation (nor does insulin).

Educational objective:
Premature ejaculation is characterized by recurrent episodes of early ejaculation accompanied by a sense of lack of control. Evaluation of any sexual disorder requires taking careful medical and substance use histories and assessing psychosocial stressors and comorbid psychiatric conditions.

References

- Advances in understanding and treating premature ejaculation.
- Pharmacotherapy for premature ejaculation.

criteria for premature ejaculation are based on ejaculation during partnered sexual activity, therefore a normal time to ejaculation during masturbation does not negate this diagnosis.

(Choice A) Erectile disorder is characterized by a persistent inability to attain or sustain an erection.

(Choice B) The symptom reported initially was a lack of sexual interest. However, on further questioning, it was found to be related to his embarrassment over premature ejaculation rather than to a pervasive lack of desire. It is common for men with premature ejaculation to develop anxiety and resultant aversion to sexual intercourse.

(Choice D) Medical conditions, including diabetes, that affect nerve function or blood flow to the pelvic tissue tend to result in erectile dysfunction rather than premature ejaculation. Medical conditions linked to premature ejaculation include prostatitis and thyroid disease.

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Educational objective:
Premature ejaculation is characterized by recurrent episodes of early ejaculation accompanied by a sense of lack of control. Evaluation of any sexual disorder requires taking careful medical and substance use histories and assessing psychosocial stressors and comorbid psychiatric conditions.

References

- Advances in understanding and treating premature ejaculation.
- Pharmacotherapy for premature ejaculation.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Male sexual dysfunction
Subject	System	Topic

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A 27-year-old man comes to the office for follow-up regarding a herniated disc. He first injured the disc 3 months ago while at work. Nonsurgical treatment options, including physical therapy and as-needed NSAIDs and tramadol, were recommended. The patient has completed physical therapy, and follow-up MRI indicates that the herniated disc has regressed. He reports a significant amount of ongoing pain and asks for a dose increase and refill of his pain medication. In the past month, the patient has been to the emergency department on 2 occasions to request pain medication due to running out before his next scheduled refill. Vital signs are within normal limits, and physical examination is unremarkable. Which of the following statements by the physician would be most appropriate at this time?

A. "Given your recent refill requests and interest in increasing your dose, I am concerned that you may be dependent on pain medication."

B. "It doesn't seem like medication is effective anymore; let's talk about alternate ways to treat your pain."

C. "Sometimes patients take pain medications to help with other types of symptoms; how has your mood been recently?"

D. "You're still experiencing a lot of pain, and it has not been easy managing it; let's discuss how you have been taking the medication."

E. "Your pain symptoms do not seem to be improving with additional medication, so a dose increase is unlikely to help you."

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A. "Given your recent refill requests and interest in increasing your dose, I am concerned that you may be dependent on pain medication." (5%)

B. "It doesn't seem like medication is effective anymore; let's talk about alternate ways to treat your pain." (16%)

C. "Sometimes patients take pain medications to help with other types of symptoms; how has your mood been recently?" (6%)

✓ D. "You're still experiencing a lot of pain, and it has not been easy managing it; let's discuss how you have been taking the medication." (71%)

E. "Your pain symptoms do not seem to be improving with additional medication, so a dose increase is unlikely to help you." (0%)

Omitted
Correct answer
D

71%
Answered correctly

09 secs
Time Spent

05/11/2020
Last Updated

Explanation

Pain is subjective, and physicians must use clinical judgment to **balance** effective **pain management** with **prevention of drug overuse** and misuse. Prescription opioid misuse has become an increasing occurrence in recent years. Signs of misuse include not taking medication as prescribed, requesting early refills, accessing drugs from multiple physicians or illicit sources, requesting higher doses, and refusing alternate pain-

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This patient is showing signs suggestive of opioid use disorder: running out of medication early; obtaining prescriptions in emergency departments rather than from the primary prescriber; tolerance (ie, requiring higher doses to attain the same effect); and dependence. However, confronting the patient about misuse at this point is unlikely to be helpful. The most appropriate initial action is a patient-centered approach: **validating** the **patient's concern** about pain control; engaging the patient in a nonjudgmental, **collaborative discussion** of how he is using the medication; and **exploring reasons** for the **escalating use**.

(Choice A) This statement may be interpreted as confrontational and put the patient on the defensive. It fails to validate the patient's subjective experience of pain and instead focuses on the physician's concerns about dependence.

(Choices B and E) These statements reject the patient's request for more medication without discussion and prematurely shut down the conversation. This approach is likely to frustrate the patient, making it less likely that he will be receptive to alternate approaches to pain management.

(Choice C) This response prematurely switches the focus of the conversation to mood, ignoring the patient's concerns. Raising the possibility of self-medication of mood symptoms would be more appropriate once the patient has already engaged in a collaborative discussion of how he is using the medication.

Educational objective:
When misuse of prescription opioids is suspected, physicians should first engage patients in a nonjudgmental, collaborative discussion to understand the reasons for the misuse.

References

- Prescription opioid abuse in chronic pain: an updated review of opioid abuse predictors and strategies to curb opioid abuse: part 1.
- Prescription opioid misuse, abuse, and treatment in the United States: an update.

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A 54-year-old woman comes to the office for a yearly preventive examination. She has no specific concerns. Blood pressure is 144/95 mm Hg and pulse is 86/min. BMI is 50 kg/m^2. Examination shows severe obesity but is otherwise unremarkable. Fasting glucose is 128 mg/dL. When the subject of her weight is mentioned, the patient says, "In my family, we just like to eat. My mother is heavy, my father is heavy, and my kids are heavy. There's no point in trying to lose weight now." Which of the following is the most appropriate response to this patient's statement?

A. "Bariatric surgery might be a good option for you to consider."

B. "Even with your family history, simple changes in your diet can lower your blood pressure."

C. "Tell me how you think your weight might relate to your blood pressure and glucose."

D. "You can still eat whatever you want as long as you don't eat so much of it."

E. "You don't have to lose all the weight at once. A little at a time will eventually make a difference."

Submit

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- A. "Bariatric surgery might be a good option for you to consider." (0%)
- B. "Even with your family history, simple changes in your diet can lower your blood pressure." (20%)
- ✓ C. "Tell me how you think your weight might relate to your blood pressure and glucose." (66%)
- D. "You can still eat whatever you want as long as you don't eat so much of it." (0%)
- E. "You don't have to lose all the weight at once. A little at a time will eventually make a difference." (11%)

Omitted
Correct answer
C

66%
Answered correctly

02 secs
Time Spent

03/06/2020
Last Updated

Explanation

Stages of change model		
Stage		Motivational interviewing
Precontemplation	**Not ready to change:** patient does not acknowledge negative consequences	• Encourage patient to evaluate consequences of current behavior • Explain & personalize the risk

Stages of change model		
Stage		**Motivational interviewing**
Precontemplation	**Not ready to change:** patient does not acknowledge negative consequences	• Encourage patient to evaluate consequences of current behavior • Explain & personalize the risk • Recommending action is premature
Contemplation	**Thinking of changing:** patient acknowledges consequences but is ambivalent	• Encourage evaluation of pros & cons of behavior change • Promote new, positive behaviors
Preparation	**Ready to change:** patient decides to change	• Encourage small initial steps • Reinforce positive outcome expectations
Action	**Making change:** patient makes specific, overt changes	• Help identify appropriate change strategies & enlist social support • Promote self-efficacy for dealing with obstacles
Maintenance	**Changes integrated** into patient's life; focus on relapse prevention	• Follow-up support; reinforce intrinsic rewards • Develop relapse prevention strategies
Identification	**Behavior is automatic:** changes incorporated into sense of self	• Praise changes

This patient has obesity with weight-related complications including hypertension and (likely) type 2 diabetes mellitus. However, she does not acknowledge the adverse effects of obesity and voices no readiness to institute behavioral changes (eg, diet, exercise). Counseling of patients with obesity and other lifestyle-related disorders (eg, smoking, alcohol abuse) can often be tailored to the individual patient by using a stages of change model; this patient is considered to be in the **precontemplation stage**.

This patient has obesity with weight-related complications including hypertension and (likely) type 2 diabetes mellitus. However, she does not acknowledge the adverse effects of obesity and voices no readiness to institute behavioral changes (eg, diet, exercise). Counseling of patients with obesity and other lifestyle-related disorders (eg, smoking, alcohol abuse) can often be tailored to the individual patient by using a stages of change model; this patient is considered to be in the **precontemplation stage**.

Patients in the precontemplation stage are not ready to explore lifestyle change options or implement specific behavioral interventions. However, it is often beneficial to explore the patient's **current understanding** of their condition and how it can affect their **future health**. Patients with obesity frequently understand much about the potential health consequences; engaging in a nonjudgmental discussion of how this patient's weight affects her blood pressure and glucose may facilitate more productive conversations in future visits.

(Choice A) Although bariatric surgery is indicated based on this patient's BMI, noninvasive treatments (ie, diet, weight loss medication) are usually attempted first. Also, specific interventions are generally not discussed until the patient is ready to consider options for change.

(Choice B) Once a patient voices willingness to consider lifestyle change (ie, contemplation stage), the clinician should start introducing potential interventions in general terms, discussing the various pros and cons. However, in this case, the clinician should first encourage the patient to consider the need for lifestyle change before discussing possible interventions.

(Choice D) Many diets (eg, low-fat, low-carbohydrate, reduced-calorie blended) have been shown to produce weight loss, but most require changes in food choices, not just food quantity. Details of implementation generally would not be discussed until the patient voices some level of readiness to change.

(Choice E) Initiating a weight loss program with small, incremental goals is frequently helpful in the implementation of lifestyle change. However, setting goals is more appropriate at the time the patient is preparing to institute behavior change (ie, preparation stage).

Educational objective:
Patients in a precontemplation stage of change do not acknowledge the negative consequences of current behaviors and are not ready to implement specific lifestyle changes. Providers working with patients in the precontemplation stage should avoid recommending specific actions but instead discuss patients' understanding of their condition and its effect on their future health. A nonjudgmental discussion of lifestyle can often facilitate more productive conversations in the future.

References

obesity frequently understand much about the potential health consequences; engaging in a nonjudgmental discussion of how this patient's weight affects her blood pressure and glucose may facilitate more productive conversations in future visits.

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Educational objective:
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References

- Readiness for weight change and its association with diet knowledge and skills, diet decision making and diet and exercise barriers in patients with type 2 diabetes.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Obesity
Subject	System	Topic

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A 28-year-old man comes to the office due to frequent anxiety attacks over the past several months. He says, "At first I shook it off because the attacks subside rapidly, but now I'm worried it will happen again while I'm at work or driving. All of a sudden I feel faint, start to shake and sweat, and my heart starts racing. I thought my heart was going to jump out of my chest." The patient has no history of cardiac disease and takes no medication. He has a history of alcohol abuse in his early twenties and smokes marijuana occasionally. The patient appears calm and his vital signs are within normal limits. Physical examination and ECG show no abnormalities. Which of the following is the most appropriate pharmacotherapy?

A. Antipsychotic
B. Benzodiazepine
C. Beta blocker
D. Monoamine oxidase inhibitor
E. Selective serotonin reuptake inhibitor
F. Tricyclic antidepressant

Submit

A 28-year-old man comes to the office due to frequent anxiety attacks over the past several months. He says, "At first I shook it off because the attacks subside rapidly, but now I'm worried it will happen again while I'm at work or driving. All of a sudden I feel faint, start to shake and sweat, and my heart starts racing. I thought my heart was going to jump out of my chest." The patient has no history of cardiac disease and takes no medication. He has a history of alcohol abuse in his early twenties and smokes marijuana occasionally. The patient appears calm and his vital signs are within normal limits. Physical examination and ECG show no abnormalities. Which of the following is the most appropriate pharmacotherapy?

- A. Antipsychotic (0%)
- B. Benzodiazepine (20%)
- C. Beta blocker (11%)
- D. Monoamine oxidase inhibitor (0%)
- ✓ E. Selective serotonin reuptake inhibitor (64%)
- F. Tricyclic antidepressant (0%)

Omitted
Correct answer
E

64%
Answered correctly

01 sec
Time Spent

01/16/2020
Last Updated

Explanation

Panic disorder	
	• Recurrent & unexpected panic attacks with ≥4 of the following:

Panic disorder	
Clinical features	• Recurrent & unexpected panic attacks with ≥4 of the following: ◦ Chest pain, palpitations, shortness of breath, choking ◦ Trembling, sweating, nausea, chills ◦ Dizziness, paresthesias ◦ Derealization, depersonalization ◦ Fear of losing control or of dying • Worry about additional attacks, avoidance behavior
Treatment	• First-line/maintenance: SSRI/SNRI &/or cognitive-behavioral therapy • Acute distress: benzodiazepines

SNRI = serotonin-norepinephrine reuptake inhibitor; **SSRI** = selective serotonin reuptake inhibitor.

Panic disorder is a chronic anxiety disorder characterized by recurrent, unexpected panic attacks, anticipatory anxiety about future attacks, and phobic avoidance. Both antidepressants and benzodiazepines are effective for panic disorder. Among the antidepressants, **selective serotonin reuptake inhibitors** (SSRIs) and serotonin-norepinephrine reuptake inhibitors are preferred first-line therapy due to their relatively benign side effect profile compared to tricyclic antidepressants and monoamine oxidase inhibitors (MAOIs).

Benzodiazepines are also effective and have **more rapid onset** of action. They are useful in severely symptomatic and functionally impaired patients who require rapid relief. However, benzodiazepines carry **risks for abuse** and result in **physiological dependence** and withdrawal if stopped abruptly. Benzodiazepines should be avoided in patients with a history of substance abuse. An SSRI would be the preferred choice in this patient who is not acutely symptomatic and has a history of alcohol abuse **(Choice B)**.

(Choices A and C) There is no evidence to support the use of antipsychotics or beta blockers as monotherapy for panic disorder.

(Choice D) MAOIs are effective in panic disorder but are not used as first-line therapy due to required dietary restrictions and avoidance of certain medications and to the risk of severe adverse effects (hypertensive crisis, serotonin syndrome).

(Choice E) Although effective, tricyclic antidepressants have a greater side effect burden (eg, anticholinergic effects, orthostatic hypotension,

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(Choice F) Although effective, tricyclic antidepressants have a greater side effect burden (eg, anticholinergic effects, orthostatic hypotension, cardiac conduction delays, danger in overdose) and have largely been replaced by SSRIs.

Educational objective:
Pharmacotherapy of panic disorder includes selective serotonin reuptake inhibitors (SSRIs) and benzodiazepines. SSRIs are often preferred to benzodiazepines due to the lack of physiological dependence and abuse potential.

References

- Evidence-based pharmacotherapy of panic disorder: an update.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Panic disorder
Subject	System	Topic

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A 29-year-old woman comes to the office due to depression. Since breaking up with her boyfriend last month, she has been extremely sad and has difficulty getting out of bed. She describes sleeping 16 hours a day, increased appetite, a 4.5-kg (10-lb) weight gain, low energy, decreased concentration, and loss of interest in socializing with her friends and family. The patient had 2 similar episodes at age 23 and 27. She also describes brief periods in the past, lasting several days, when she was uncharacteristically confident and optimistic, successfully juggled 3 part-time jobs, and felt well rested and energetic despite sleeping only 3-4 hours a night. The patient drinks a glass of wine several times a week but does not use tobacco or illicit drugs. Which of the following is the most likely diagnosis?

A. Adjustment disorder with depressed mood

B. Bipolar I disorder

C. Bipolar II disorder

D. Cyclothymic disorder

E. Recurrent major depressive disorder

Submit

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- A. Adjustment disorder with depressed mood (4%)
- B. Bipolar I disorder (28%)
- ✓ C. Bipolar II disorder (46%)
- D. Cyclothymic disorder (14%)
- E. Recurrent major depressive disorder (5%)

Omitted
Correct answer
C

46%
Answered correctly

02 secs
Time Spent

01/27/2020
Last Updated

Explanation

Bipolar & related disorders	
Manic episode • Symptoms more **severe**	**Hypomanic episode** • Symptoms **less severe**

Bipolar & related disorders	
Manic episode • Symptoms more **severe** • **1 week** unless hospitalized • **Marked impairment** in social or occupational functioning or **hospitalization** necessary • May have **psychotic features**; makes episode manic by definition	**Hypomanic episode** • Symptoms **less severe** • **≥4 consecutive days** • Unequivocal, observable change in functioning from patient's baseline • Symptoms not severe enough to cause marked impairment or necessitate hospitalization • **No psychotic features**
Bipolar I • **Manic episode(s)** • Depressive episodes common but not required for diagnosis	
Bipolar II • **Hypomanic episode(s)** • ≥1 major depressive episodes	
Cyclothymic disorder • **≥2 years** of fluctuating, mild hypomanic & depressive symptoms that do not meet criteria for hypomanic or major depressive episodes	

This patient's current major depressive episode (≥2 weeks, depressed mood, low energy, hypersomnia, increased appetite, decreased concentration, loss of interest) and history suggestive of a hypomanic episode (increased activity, energy and confidence, decreased need for sleep) are consistent with a diagnosis of **bipolar II disorder**. Patients with bipolar II disorder have a **history of hypomanic (not manic) episodes** and **one or more major depressive episodes**. Hypomania is differentiated from mania by a lesser degree of severity and functional impairment and the absence of psychosis. As in this patient, those experiencing hypomania exhibit a noticeable change in behavior but are often very productive despite requiring less sleep. In contrast to manic patients, those who are hypomanic are often able to work and are rarely hospitalized.

(Choice A) Adjustment disorders develop in response to an identifiable stressor but are not diagnosed if the patient has sufficient symptoms to

This patient's current major depressive episode (≥2 weeks, depressed mood, low energy, hypersomnia, increased appetite, decreased concentration, loss of interest) and history suggestive of a hypomanic episode (increased activity, energy and confidence, decreased need for sleep) are consistent with a diagnosis of **bipolar II disorder**. Patients with bipolar II disorder have a **history of hypomanic (not manic) episodes** and **one or more major depressive episodes**. Hypomania is differentiated from mania by a lesser degree of severity and functional impairment and the absence of psychosis. As in this patient, those experiencing hypomania exhibit a noticeable change in behavior but are often very productive despite requiring less sleep. In contrast to manic patients, those who are hypomanic are often able to work and are rarely hospitalized.

(Choice A) Adjustment disorders develop in response to an identifiable stressor but are not diagnosed if the patient has sufficient symptoms to meet the criteria for another disorder.

(Choice B) Bipolar I disorder is diagnosed in patients who experience manic episodes (severe symptoms causing marked impairment, possible psychotic features). Major depressive episodes are common but not required for diagnosis.

(Choice D) Patients diagnosed with cyclothymic disorder experience at least 2 years of numerous periods of hypomanic and depressive symptoms that do not meet the criteria for hypomanic or major depressive episodes.

(Choice E) This patient's history of a distinct change in behavior (elevated mood, excess energy, hyperactivity, decreased need for sleep, inflated self-esteem) is consistent with hypomania, ruling out unipolar major depressive disorder.

Educational objective:
Patients who experience major depressive and hypomanic episodes are diagnosed with bipolar II disorder. In contrast to manic episodes, hypomanic episodes are less severe, do not involve psychosis, and cause a lesser degree of functional impairment.

References

- Bipolar disorder diagnosis: challenges and future directions.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Bipolar disorder
Subject	System	Topic

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A 40-year-old woman comes to the office due to worsening anxiety and insomnia over the past 3 months. She says, "I'm really worried that something is wrong with me. I was never a particularly anxious person, but now I feel anxious all the time. Sometimes I feel panicky for no reason; my heart races and I break out in a sweat. The only benefit is that I have lost 5 pounds (2.3 kg) without even trying." The patient has no significant medical or psychiatric history. She drinks 2-3 glasses of wine per week and does not smoke or use illicit drugs. Blood pressure is 130/90 mm Hg and pulse is 112/min. On physical examination, the patient is restless and has warm, moist skin and mild hand tremor bilaterally. Mental status examination is notable for a frightened stare, anxious mood, and rapid speech. Which of the following is the most likely diagnosis?

- A. Alcohol withdrawal
- B. Anxiety caused by a medical condition
- C. Generalized anxiety disorder
- D. Illness anxiety disorder
- E. Panic disorder
- F. Somatic symptom disorder

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A. Alcohol withdrawal (1%)
✓ B. Anxiety caused by a medical condition (57%)
C. Generalized anxiety disorder (18%)
D. Illness anxiety disorder (4%)
E. Panic disorder (15%)
F. Somatic symptom disorder (3%)

Omitted
Correct answer
B

57%
Answered correctly

01 sec
Time Spent

01/28/2020
Last Updated

Explanation

Anxiety and insomnia are nonspecific symptoms that can be due to a variety of medical and psychiatric disorders. Diagnosis of **primary anxiety disorders** requires **ruling out medical illness** and substance-induced etiologies (due to medications, drugs of abuse, or toxins). Chronic anxiety and insomnia (as seen in generalized anxiety disorder) and panic attacks (as seen in panic disorder) can be symptoms of a medical illness

Anxiety and insomnia are nonspecific symptoms that can be due to a variety of medical and psychiatric disorders. Diagnosis of **primary anxiety disorders** requires **ruling out medical illness** and substance-induced etiologies (due to medications, drugs of abuse, or toxins). Chronic anxiety and insomnia (as seen in generalized anxiety disorder) and panic attacks (as seen in panic disorder) can be symptoms of a medical illness or **substance intoxication or withdrawal**.

The new onset of anxiety in this patient with no psychiatric history and **prominent physical findings** on examination suggests that anxiety is more likely due to another medical condition (ie, the anxiety is a direct physiological effect of the medical condition) than to a primary anxiety disorder. Specifically, this patient's weight loss without trying; tachycardia; warm, moist skin; tremor; frightened stare (possible eyelid retraction); and restlessness are consistent with **hyperthyroidism**. Other medical conditions known to present with anxiety symptoms include hypoglycemia, pheochromocytoma, hypercortisolism, and cardiac arrhythmias. Common substance-induced etiologies include sympathomimetic drugs, caffeine, stimulant intoxication, and alcohol and sedative-hypnotic withdrawal.

(Choice A) Alcohol withdrawal can present with anxiety, insomnia, tremulousness, palpitations, and diaphoresis. However, the extent of this patient's alcohol use would not result in dependence and withdrawal.

(Choices C and E) Primary anxiety disorders should not be diagnosed when anxiety symptoms are caused by a medical condition. Generalized anxiety disorder is characterized by excessive, uncontrollable worry about multiple issues. Symptoms must persist for at least 6 months, whereas this patient's symptoms have lasted only 3 months. Panic disorder involves recurrent, unexpected panic attacks.

(Choices D and F) These disorders involve either having a serious undiagnosed medical illness (illness anxiety disorder) or excessive preoccupation with one or more somatic symptoms (somatic symptom disorder). They would not be diagnosed in this patient, who has legitimate concerns about symptoms that have not yet been evaluated.

Educational objective:
The differential diagnosis of anxiety includes medical conditions and substance-induced etiologies (eg, intoxication, withdrawal). Primary anxiety disorders are not diagnosed when anxiety is caused by the physiological effects of a medical condition (eg, hyperthyroidism) or drug.

References

- Hyperthyroidism and psychiatric morbidity: evidence from a Danish nationwide register study.
- Diagnosis of co-morbid axis-I psychiatric disorders among women with newly diagnosed, untreated endocrine disorders.

disorder. Specifically, this patient's weight loss without trying; tachycardia; warm, moist skin; tremor; frightened stare (possible eyelid retraction); and restlessness are consistent with **hyperthyroidism**. Other medical conditions known to present with anxiety symptoms include hypoglycemia, pheochromocytoma, hypercortisolism, and cardiac arrhythmias. Common substance-induced etiologies include sympathomimetic drugs, caffeine, stimulant intoxication, and alcohol and sedative-hypnotic withdrawal.

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The differential diagnosis of anxiety includes medical conditions and substance-induced etiologies (eg, intoxication, withdrawal). Primary anxiety disorders are not diagnosed when anxiety is caused by the physiological effects of a medical condition (eg, hyperthyroidism) or drug.

References

- Hyperthyroidism and psychiatric morbidity: evidence from a Danish nationwide register study.
- Diagnosis of co-morbid axis-I psychiatric disorders among women with newly diagnosed, untreated endocrine disorders.
- Depression, anxiety, health-related quality of life, and disability in patients with overt and subclinical thyroid dysfunction.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Anxiety
Subject	System	Topic

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An 8-year-old boy is brought to the office due to severe behavioral problems. The patient has been suspended from school on two occasions over the past year due to running around in the classroom and talking back to his teachers. His parents report that he is "in constant motion" and are concerned about his poor grades and inability to follow directions or household routines. The patient has a history of mild asthma and no other medical problems. There is a family history of schizophrenia in a maternal uncle. Physical examination shows marked fidgeting and difficulty staying seated but is otherwise normal. The boy frequently interrupts his mother while she speaks with the physician. Treatment with methylphenidate is recommended. The parents should be educated about which of the following regarding this medication?

A. Acute dystonia
B. Decreased appetite and weight loss
C. Delayed onset of action
D. Polyuria and polydipsia
E. Increased appetite and weight gain
F. Initial worsening of symptoms
G. Life-threatening rash
H. Sedation

Submit

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- A. Acute dystonia (1%)
- ✓ B. Decreased appetite and weight loss (76%)
- C. Delayed onset of action (2%)
- D. Polyuria and polydipsia (0%)
- E. Increased appetite and weight gain (6%)
- F. Initial worsening of symptoms (8%)
- G. Life-threatening rash (0%)
- H. Sedation (4%)

Omitted
Correct answer
B

76%
Answered correctly

01 sec
Time Spent

01/29/2020
Last Updated

Explanation

Explanation

This patient's hyperactivity, impulsivity, and disorganization that are resulting in behavioral problems both at school and at home are characteristic of attention-deficit hyperactivity disorder **(ADHD)**. **Psychostimulants** (methylphenidate and amphetamines) are first-line treatment for ADHD in school-age children and are generally safe and well tolerated. They have a rapid onset of action, resulting in improvement in core ADHD symptoms for the expected duration of action **(Choices C and F)**.

The most **common adverse effects** include **decreased appetite**, **weight loss**, and **insomnia**. Most affected children will experience a mild decrease in appetite that can typically be managed by administering the medication after meals and encouraging the child to eat nutrient-dense foods. Other psychostimulant adverse effects that are less common include tics and increases in heart rate and blood pressure. During treatment, patients are typically seen monthly to monitor weight, height, heart rate, and blood pressure.

(Choices A, E, and H) Increased appetite, weight gain, and sedation are adverse effects commonly associated with second-generation antipsychotics; acute dystonia is an extrapyramidal side effect most commonly seen with high-potency first-generation antipsychotics. These drugs do not have a role in the treatment of ADHD.

(Choice D) The mood stabilizer lithium has been associated with polyuria and polydipsia due to its potential to cause nephrogenic diabetes insipidus. Lithium is used to treat bipolar disorder and is not effective in ADHD.

(Choice G) The risk of life-threatening rash, such as seen in Stevens-Johnson syndrome, has been associated with lamotrigine, an anticonvulsant used to treat seizure and bipolar disorders.

Educational objective:
Decreased appetite and insomnia are the most common adverse effects of psychostimulant medications used to treat attention-deficit hyperactivity disorder. They are usually mild and can be managed without stopping the medication.

References

- Attention-deficit hyperactivity disorder medication use: factors involved in prescribing, safety aspects and outcomes.
- Safety of medicines used for ADHD in children: a review of published prospective clinical trials.

Behavioral science Psychiatric/Behavioral & Substance Abuse Attention deficit hyperactivity disorder

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A 30-year-old man comes to the office due to depression. He describes a 4-week history of severely depressed mood, loss of motivation, loss of interest, and sleeping 12 hours a day. The patient has difficulty concentrating and worries that it is interfering with his work. He is pessimistic about the future but has no suicidal thoughts. The patient had a previous depressive episode in his 20s that responded rapidly to sertraline. He felt "really good and energetic" after a few days of treatment but discontinued the antidepressant a week later as he did not feel that he needed it. He drinks 1 or 2 beers on social occasions. Physical examination is normal. Which of the following would be most important to assess prior to initiating pharmacologic treatment for this patient?

A. Complete blood count
B. Comprehensive metabolic panel
C. Electrocardiogram
D. History of mania
E. History of sexual dysfunction
F. Urine toxicology

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- A. Complete blood count (2%)
- B. Comprehensive metabolic panel (6%)
- C. Electrocardiogram (2%)
- ✓ D. History of mania (65%)
- E. History of sexual dysfunction (19%)
- F. Urine toxicology (3%)

Omitted
Correct answer
D

65%
Answered correctly

01 sec
Time Spent

01/26/2020
Last Updated

Explanation

All patients with a major depressive episode should be screened for a **past history of manic episodes** to differentiate major depressive disorder (unipolar depression) from **bipolar disorder**. This is particularly relevant in this patient as his atypically rapid response to the selective serotonin reuptake inhibitor sertraline is suggestive of treatment-emergent mania. If further history substantiates a diagnosis of bipolar disorder,

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All patients with a major depressive episode should be screened for a **past history of manic episodes** to differentiate major depressive disorder (unipolar depression) from **bipolar disorder**. This is particularly relevant in this patient as his atypically rapid response to the selective serotonin reuptake inhibitor sertraline is suggestive of treatment-emergent mania. If further history substantiates a diagnosis of bipolar disorder, **antidepressant monotherapy** should be avoided, as all antidepressants carry a **risk of inducing mania**.

Bipolar patients in the depressed phase may be misdiagnosed with unipolar major depressive disorder when either the physician neglects to ask about past manic symptoms or patients do not report them due to limited insight, difficulty recalling, or a tendency to minimize past manic episodes. Physicians should question patients regarding a history of distinct periods of elevated mood and increased energy, decreased need for sleep, hyperactivity, racing thoughts, and uncharacteristic risk-taking behavior.

(Choices A, B, and F) A complete blood count, metabolic panel, and urine toxicology screen are not priorities for this patient with no new physical symptoms, normal physical examination, and minimal substance use. Selected laboratory tests should be performed in cases of treatment-resistant depression or in patients who experience new-onset physical symptoms along with depression (eg, thyroid function tests in a patient with signs of hypothyroidism).

(Choice C) An ECG is not routinely performed prior to prescribing first-line antidepressants in an otherwise healthy, young patient.

(Choice E) A history of sexual dysfunction would be helpful prior to selection and initiation of a specific antidepressant, as medications commonly cause sexual dysfunction. However, ensuring accurate diagnosis by screening for bipolar disorder takes precedence.

Educational objective:
Patients experiencing a major depressive episode should be carefully screened for past manic episodes to rule out bipolar disorder. Antidepressant monotherapy should be avoided in patients with bipolar disorder due to the risk of precipitating mania.

References

- Differential diagnosis of bipolar disorder and major depressive disorder.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Bipolar disorder
Subject	System	Topic

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A 25-year-old graduate student with a history of recurrent ear infections as a child feels anxious and sweats when she is in the examination room with her primary care physician. She recently got a roommate, a nursing student, who leaves her stethoscope on the coffee table after returning from class. The patient sweats and feels her heart start to race whenever she sees the stethoscope. This patient's response to her roommate's stethoscope is an example of which of the following phenomena?

A. Classical conditioning
B. Negative punishment
C. Negative reinforcement
D. Operant conditioning
E. Reaction formation
F. Regression

Submit

A 25-year-old graduate student with a history of recurrent ear infections as a child feels anxious and sweats when she is in the examination room with her primary care physician. She recently got a roommate, a nursing student, who leaves her stethoscope on the coffee table after returning from class. The patient sweats and feels her heart start to race whenever she sees the stethoscope. This patient's response to her roommate's stethoscope is an example of which of the following phenomena?

- ✓ A. Classical conditioning (78%)
- B. Negative punishment (0%)
- C. Negative reinforcement (4%)
- D. Operant conditioning (10%)
- E. Reaction formation (4%)
- F. Regression (2%)

Omitted
Correct answer
A

78%
Answered correctly

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01/20/2020
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Explanation

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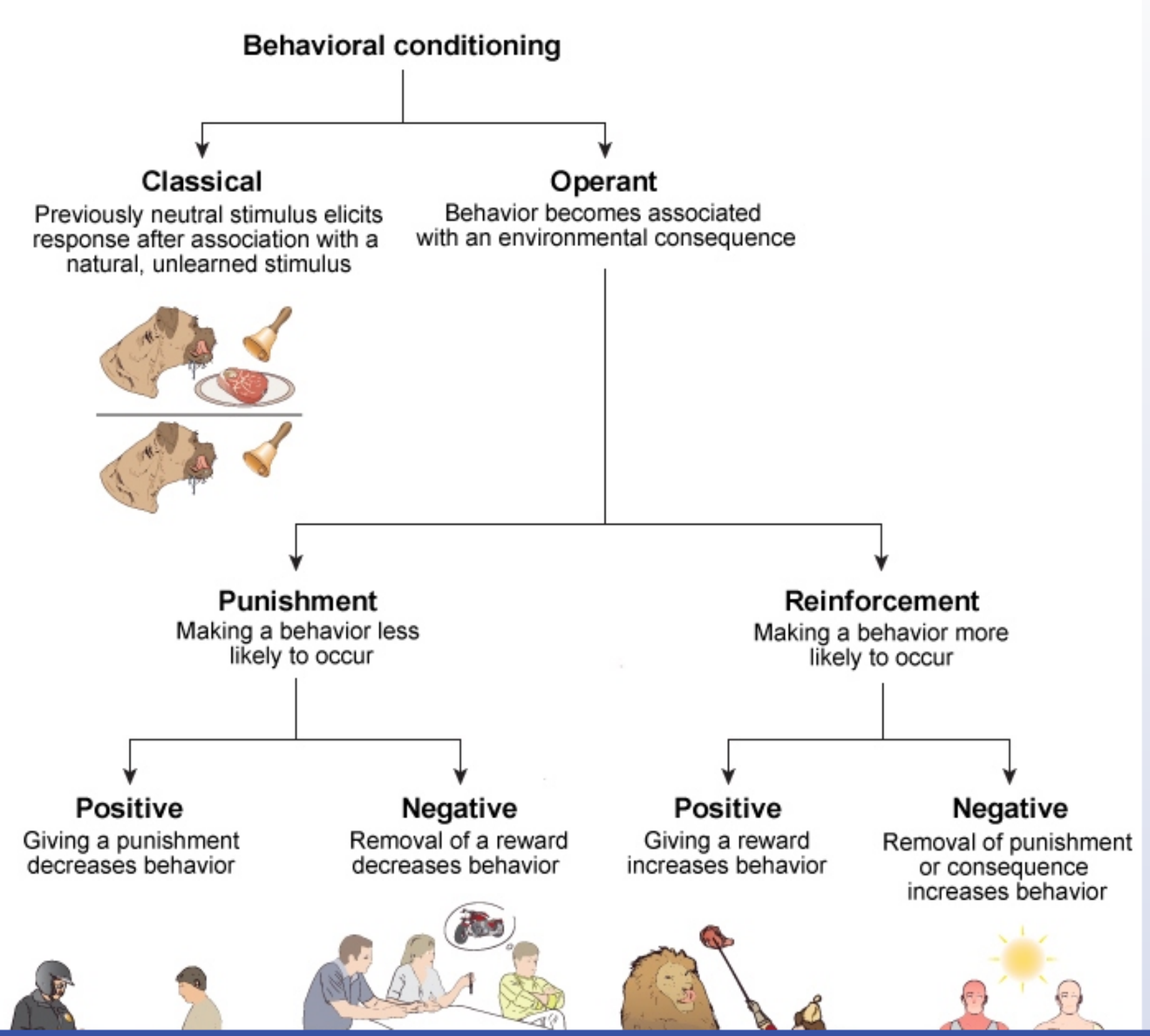

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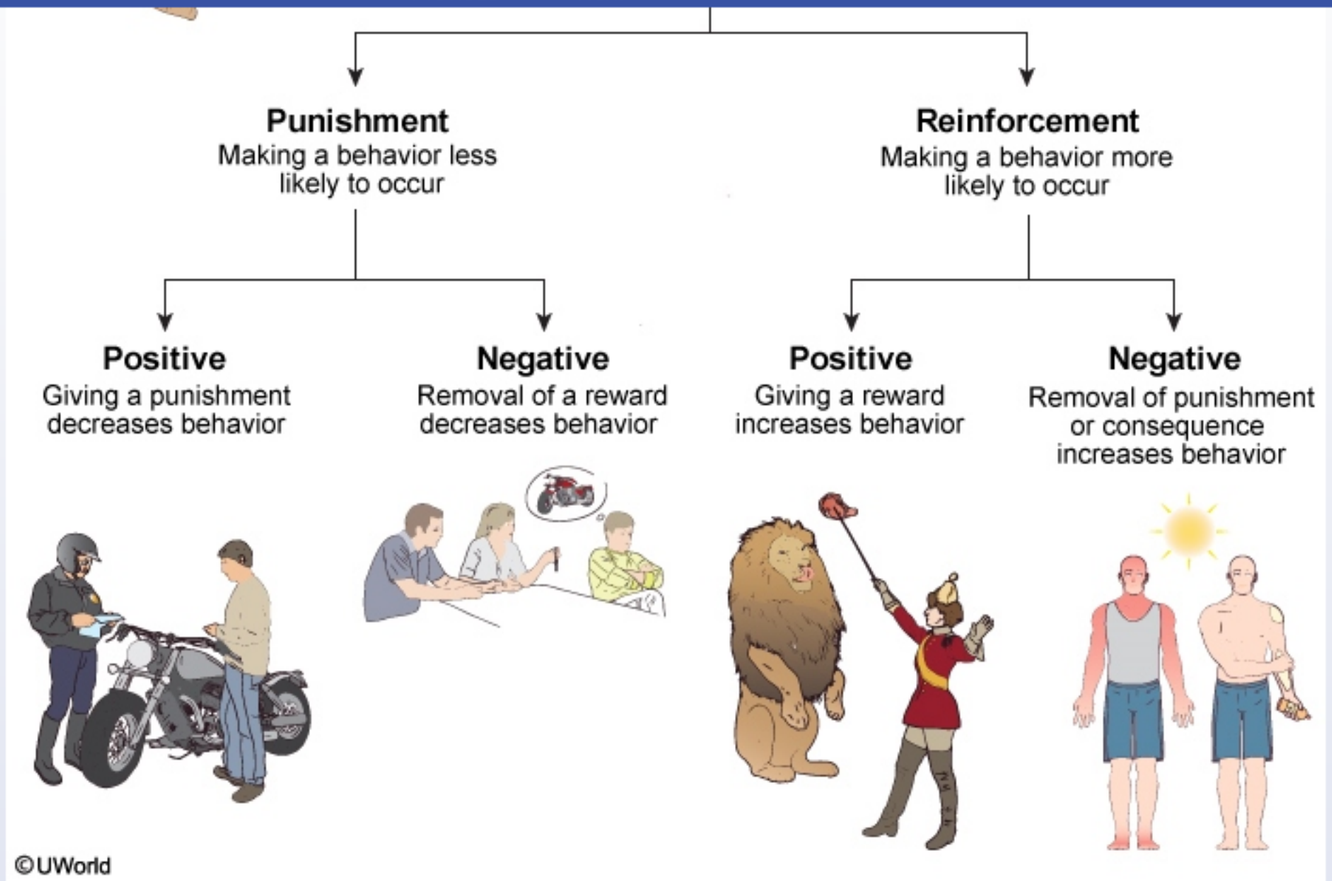

This patient's response to her roommate's stethoscope is an example of **classical conditioning**. Childhood encounters with her primary care physician for ear infections (**unconditioned stimulus**) caused anxiety (an automatic reaction called an **unconditioned response**), resulting in sweating at subsequent health care visits. The encounters with her physician are most likely associated with the presence of a stethoscope (the **conditioned stimulus**). Repeated pairing of the unconditioned stimulus (eg, physician encounter) with the conditioned stimulus (eg, stethoscope) allows the conditioned stimulus alone to elicit a learned, **conditioned response** (eg, sweating).

Classical conditioning provides one explanation for "**white coat hypertension**," a condition in which a physician's white coat or examination room acts as a conditioned stimulus, causing anxiety and transient blood pressure elevation during health care visits.

This patient's response to her roommate's stethoscope is an example of **classical conditioning**. Childhood encounters with her primary care physician for ear infections (**unconditioned stimulus**) caused anxiety (an automatic reaction called an **unconditioned response**), resulting in sweating at subsequent health care visits. The encounters with her physician are most likely associated with the presence of a stethoscope (the **conditioned stimulus**). Repeated pairing of the unconditioned stimulus (eg, physician encounter) with the conditioned stimulus (eg, stethoscope) allows the conditioned stimulus alone to elicit a learned, **conditioned response** (eg, sweating).

Classical conditioning provides one explanation for "**white coat hypertension**," a condition in which a physician's white coat or examination room acts as a conditioned stimulus, causing anxiety and transient blood pressure elevation during health care visits.

(Choices B, C, and D) In operant conditioning, rewards and punishments are used to reinforce behavior. Negative punishment is the removal of a reward to decrease a behavior (eg, a teenager's driving privileges are taken away after returning home past curfew). With negative reinforcement, desired behavior is strengthened through the removal of a negative outcome (eg, suffering a bad sunburn promotes application of sunscreen to prevent future sunburns).

(Choice E) Reaction formation is the unconscious transformation of an unacceptable impulse or emotion into its opposite (eg, if this patient tells her physician she enjoys clinic visits and acts extremely relaxed during the examination to defend against underlying anxiety).

(Choice F) Regression is a defense mechanism that involves unconsciously reverting to a less mature way of coping with difficulties (eg, if this patient starts sleeping with a stuffed animal to manage anxiety about an upcoming appointment).

Educational objective:
Classical conditioning involves a neutral stimulus being repeatedly paired with a non-neutral stimulus that elicits a reflexive, unconditioned response. Over time, the formerly neutral stimulus is able to evoke a conditioned response by itself in absence of the non-neutral stimulus.

References

- White coat hypertension: improving the patient-health care practitioner relationship.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Behavioral responses
Subject	System	Topic

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A 24-year-old man comes to the emergency department due to a painful erection for the past 6 hours. He has never had this condition before and says it is unrelated to sexual excitement. Medical history is significant for treatment-resistant major depressive disorder, obsessive-compulsive disorder, and insomnia. The patient has smoked a pack of cigarettes a day for 2 years and drinks 1 or 2 cans of beer daily. Examination reveals engorged corpora cavernosa but otherwise shows no abnormalities. Which of the following drugs is the most likely cause of this patient's condition?

A. Bupropion
B. Citalopram
C. Clomipramine
D. Imipramine
E. Paroxetine
F. Phenelzine
G. Trazodone
H. Zolpidem

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A. Bupropion (7%)
B. Citalopram (2%)
C. Clomipramine (1%)
D. Imipramine (2%)
E. Paroxetine (3%)
F. Phenelzine (4%)
✓ G. Trazodone (76%)
H. Zolpidem (1%)

Omitted
Correct answer
G

76%
Answered correctly

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02/19/2020
Last Updated

Explanation

Trazodone is a **sedating antidepressant** used off-label most often as a hypnotic to treat **insomnia** associated with depression or antidepressant

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Trazodone is a **sedating antidepressant** used off-label most often as a hypnotic to treat **insomnia** associated with depression or antidepressant treatment. It has been associated with the rare but serious side effect of **priapism** (ie, persistent erection of the penis for >4 hours that is not associated with sexual excitement). Priapism is a medical emergency that, if left untreated, can result in permanent damage to penile tissue and erectile dysfunction. Priapism occurs most often in young adult men.

Trazodone is a serotonin modulator (it antagonizes postsynaptic serotonin receptors and inhibits serotonin reuptake) that has minimal effects on norepinephrine and dopamine. Additional properties include alpha-adrenergic blockade—which may account for the side effects of orthostatic hypotension and priapism—and histamine H1 receptor antagonism, which contributes to its sedating effect. Trazodone should be used with caution in patients with conditions that predispose to priapism (eg, **sickle cell disease**).

(Choices A, B, and E) These antidepressants have not been associated with priapism. Bupropion is a dopamine-norepinephrine reuptake inhibitor that is not associated with sexual side effects and may reduce sexual side effects induced by selective serotonin reuptake inhibitors (SSRIs) when used as an adjunctive treatment. Citalopram and paroxetine, in contrast, are SSRIs that have been associated with high rates of sexual side effects (eg, decreased libido, anorgasmia, delayed ejaculation).

(Choices C, D, and F) Clomipramine and imipramine are tricyclic antidepressants used as second-line therapy due to their higher side effect burden and risk for cardiotoxicity in overdose. Phenelzine is a monoamine oxidase inhibitor used in the treatment of resistant depression; it requires dietary restrictions due to the risk of hypertensive crisis. These agents do not typically cause priapism.

(Choice H) Zolpidem is a nonbenzodiazepine hypnotic used in the treatment of insomnia; it does not carry a risk of priapism.

Educational objective:
Trazodone is a highly sedating antidepressant commonly used to treat insomnia. Priapism is a rare but serious adverse effect.

References

- Off-label trazodone prescription: evidence, benefits and risks.
- Trazodone for insomnia: a systematic review.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Priapism
Subject	System	Topic

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A 28-year-old medical student comes to the office due to anxiety and trouble concentrating. He has worked part-time as a volunteer firefighter and reports that he has been struggling to concentrate in class ever since witnessing a child who had been badly burnt pulled out of a house fire 3 weeks ago. On two occasions the patient began to sweat, shake, and have trouble breathing: "I felt like my head was spinning and had to run out of the classroom to catch my breath." He also reports having trouble sleeping, being irritable with friends and family, and occasionally feeling like he is in a dream. The patient says, "Sometimes I'll be sitting in class, and I suddenly feel like I am back in the burning house. I can smell the fire and see the child." He has missed almost half of his classes to avoid being in crowded classrooms and has recently quit his volunteer job. Which of the following is the most likely diagnosis?

A. Acute stress disorder
B. Adjustment disorder
C. Agoraphobia
D. Depersonalization/derealization disorder
E. Panic disorder
F. Post-traumatic stress disorder

Submit

A 28-year-old medical student comes to the office due to anxiety and trouble concentrating. He has worked part-time as a volunteer firefighter and reports that he has been struggling to concentrate in class ever since witnessing a child who had been badly burnt pulled out of a house fire 3 weeks ago. On two occasions the patient began to sweat, shake, and have trouble breathing: "I felt like my head was spinning and had to run out of the classroom to catch my breath." He also reports having trouble sleeping, being irritable with friends and family, and occasionally feeling like he is in a dream. The patient says, "Sometimes I'll be sitting in class, and I suddenly feel like I am back in the burning house. I can smell the fire and see the child." He has missed almost half of his classes to avoid being in crowded classrooms and has recently quit his volunteer job. Which of the following is the most likely diagnosis?

- ✓ A. Acute stress disorder (59%)
- B. Adjustment disorder (0%)
- C. Agoraphobia (0%)
- D. Depersonalization/derealization disorder (1%)
- E. Panic disorder (1%)
- F. Post-traumatic stress disorder (36%)

Omitted
Correct answer
A

59%
Answered correctly

01 sec
Time Spent

02/25/2020
Last Updated

Explanation

Acute stress disorder

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Acute stress disorder	
Clinical features	• Exposure to actual or threatened trauma • Intrusive memories, nightmares, flashbacks with intense psychological/physiological reactions • Amnesia for event, detachment, avoidance of reminders • Negative mood • Dissociative symptoms • Arousal with sleep disturbance, irritability, hypervigilance, exaggerated startle, impaired concentration • **Lasting ≥3 days & ≤1 month**

This patient's intrusive **flashbacks**, arousal (ie, panic-like symptoms, sleep disturbance, irritability), **avoidance** of returning to his volunteer work, and **derealization** (feeling detached from his surroundings) lasting for 3 weeks after experiencing a life-threatening event are suggestive of **acute stress disorder (ASD)**. **Nightmares** of the event, depressed mood, difficulty concentrating, decreased interest in activities, and **hypervigilance** are also common. Reminders of the event, such as being in an enclosed or crowded space, can result in anxiety or panic and lead to avoidance. This often results in significant functional impairment.

In ASD, symptoms usually develop directly following the trauma and last from 3 days to **1 month**, after which they can resolve or develop into more chronic symptoms. When symptoms persist for more than 1 month, the diagnosis is changed to post-traumatic stress disorder **(Choice F)**.

(Choice B) The precipitating incidents in adjustment disorders are typically common stressors rather than life-threatening traumas. Adjustment disorders are also not diagnosed when symptoms meet the criteria for another, more specific disorder, such as ASD.

(Choice C) In agoraphobia, patients avoid situations where escape may not be possible or help may not be available if panic or other embarrassing symptoms occur. This patient's avoidance is secondary to a traumatic event, and his symptoms better meet criteria for ASD.

(Choice D) Dissociative symptoms such as depersonalization (detachment from self) or derealization (detachment from surroundings) commonly occur as part of the symptom cluster in ASD. Depersonalization/derealization disorder is not diagnosed separately if the patient meets criteria for ASD.

(Choice E) Panic disorder is associated with recurrent panic attacks that occur without a clear precipitant. This patient's panic symptoms are related to his recent trauma.

This patient's intrusive **flashbacks**, arousal (ie, panic-like symptoms, sleep disturbance, irritability), **avoidance** of returning to his volunteer work, and **derealization** (feeling detached from his surroundings) lasting for 3 weeks after experiencing a life-threatening event are suggestive of **acute stress disorder (ASD)**. **Nightmares** of the event, depressed mood, difficulty concentrating, decreased interest in activities, and **hypervigilance** are also common. Reminders of the event, such as being in an enclosed or crowded space, can result in anxiety or panic and lead to avoidance. This often results in significant functional impairment.

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(Choice E) Panic disorder is associated with recurrent panic attacks that occur without a clear precipitant. This patient's panic symptoms are related to his recent trauma.

Educational objective:
Acute stress disorder is characterized by intrusive experiences (flashbacks, nightmares), arousal (poor concentration, restless sleep), dissociative symptoms, and avoidance of traumatic reminders, as well as mood disturbances in response to a life-threatening trauma. Symptoms last between 3 days and 1 month.

References

- Acute stress and subsequent health outcomes: a systematic review.

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A 2-year-old girl is brought to the office due to concerns about her development. The girl says approximately 40 words and does not string words together. She can jump, walk upstairs slowly, build a 6-block tower, and follow short commands. She feeds and helps to dress herself. The girl's mother says, "My daughter is such a happy child. She loves playing with the other kids at day care. She is affectionate and caring toward us and her dog. I don't know why she won't speak. Her sister was using sentences by age 2. Is there something wrong with her?" Which of the following is the most appropriate response by the physician?

A. Every child is different; we will reevaluate her development next year.

B. Her speech delay raises concern for autism spectrum disorder and requires further evaluation.

C. I am concerned that your child may have global developmental delay.

D. There is no need to worry; your child's development is within the normal range.

E. This is most likely selective mutism and can be easily treated.

F. Your child may have a language disorder and could benefit from further assessment.

Submit

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- A. Every child is different; we will reevaluate her development next year. (15%)
- B. Her speech delay raises concern for autism spectrum disorder and requires further evaluation. (2%)
- C. I am concerned that your child may have global developmental delay. (0%)
- D. There is no need to worry; your child's development is within the normal range. (33%)
- E. This is most likely selective mutism and can be easily treated. (1%)
- ✓ F. Your child may have a language disorder and could benefit from further assessment. (46%)

Omitted
Correct answer
F

46%
Answered correctly

01 sec
Time Spent

06/05/2020
Last Updated

Explanation

At **age 2**, a child should have a vocabulary of **50-200 words** and be able to use **2-word phrases**. This patient has an isolated **language disorder**; her motor and social skills are normal. Language is the most **commonly delayed milestone**, with an estimated prevalence of 10%-15% at age 2. Many children with isolated language delay will catch up in preschool (prevalence falls to 5% after age 3). However, children with persistent language deficits are at increased risk for writing and/or reading learning disorders in their school years. This child should have a

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(Choice A) Although it is appropriate to reassure the mother that development varies among children, it is incorrect to imply that no further action is required at this time. Children are adaptable; their brains are constantly developing, and they can make great gains with early intervention and close monitoring.

(Choice B) Autism spectrum disorder is characterized by impaired social communication/interactions and restricted, repetitive patterns of behavior or interests typically presenting by age 2. This child interacts well with her peers and family, and her mother has described no repetitive behaviors or fixed interests.

(Choice C) Global developmental delay is characterized by a failure to meet age-related expectations in multiple areas, including intellectual, communicative, social, and motor functions. This child is functioning below her age in the area of language only.

(Choice D) This child's speech development is not within the normal range and requires further assessment.

(Choice E) Selective mutism is a failure to speak in a specific social situation (eg, school) but not in other situations (eg, home). It is often associated with anxiety, especially social phobia. This child's language impairment is not specific to a certain situation.

Educational objective:
At age 2, children should have a vocabulary of 50-200 words and be using 2-word phrases. Parents' concerns about delayed milestones should be validated; they should be reassured that children often catch up but may need help. Further evaluation and regular monitoring are required.

References

- Causal effects on child language development: a review of studies in communication sciences and disorders.

Behavioral science | Psychiatric/Behavioral & Substance Abuse | Language disorder

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A 72-year-old woman is admitted to the hospital due to abnormal vaginal bleeding. Uterine cancer is diagnosed and the patient is scheduled for a hysterectomy. Following successful surgery, the patient compliments her surgeon, exclaiming that she is "a brilliant doctor who saved my life." After an uneventful recovery, the patient is ready to return home. On the day of discharge, a nurse informs her that the surgeon is running late due to an emergency. The patient responds angrily that the surgeon is "terrible and doesn't care about patients." Which of the following is the most likely explanation for this patient's behavior?

A. Acting out
B. Displacement
C. Passive aggression
D. Projection
E. Reaction formation
F. Splitting

Submit

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- A. Acting out (3%)
- B. Displacement (2%)
- C. Passive aggression (1%)
- D. Projection (1%)
- E. Reaction formation (5%)
- ✓ F. Splitting (85%)

Omitted
Correct answer
F

85%
Answered correctly

01 sec
Time Spent

07/06/2020
Last Updated

Explanation

Key defense mechanisms	
	• Acting out: Expressing unacceptable feelings through actions • Denial: Behaving as if an aspect of reality does not exist

Exhibit Display

Developmental milestones during toddlerhood				
Age	**Gross motor**	**Fine motor**	**Language**	**Social/Cognitive**
12 months	• Stands well • Walks first steps independently • Throws a ball	• 2-finger pincer grasp	• Says first words (other than "mama" & "dada")	• Separation anxiety • Follows 1-step commands with gestures
18 months	• Runs • Kicks a ball	• Builds a tower of 2-4 cubes • Removes clothing	• 10- to 25-word vocabulary • Identifies ≥1 body parts	• Understands "mine" • Begins pretend play
2 years	• Walks up/down stairs with both feet on each step • Jumps	• Builds a tower of 6 cubes • Copies a line	• Vocabulary ≥50 words • 2-word phrases	• Follows 2-step commands • Parallel play • Begins toilet training
3 years	• Walks up/down stairs with alternating feet • Rides tricycle	• Copies a circle • Uses utensils	• 3-word sentences • Speech 75% intelligible	• Knows age/gender • Imaginative play
4 years	• Balances & hops on 1 foot	• Copies a cross	• Identifies colors • Speech 100% intelligible	• Cooperative play
5 years	• Skips • Catches ball with 2 hands	• Copies a square • Ties shoelaces • Dresses/bathes independently • Prints letters	• Counts to 10 • 5-word sentences	• Has friends • Completes toilet training

Add To New Card | Existing Card

Block Time Remaining: 00:02:16

TUTOR

3 Feedback Suspend End Block

A 72-year-old woman is admitted to the hospital due to abnormal vaginal bleeding. Uterine cancer is diagnosed and the patient is scheduled for a hysterectomy. Following successful surgery, the patient compliments her surgeon, exclaiming that she is "a brilliant doctor who saved my life." After an uneventful recovery, the patient is ready to return home. On the day of discharge, a nurse informs her that the surgeon is running late due to an emergency. The patient responds angrily that the surgeon is "terrible and doesn't care about patients." Which of the following is the most likely explanation for this patient's behavior?

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- C. Passive aggression (1%)
- D. Projection (1%)
- E. Reaction formation (5%)
- ✓ F. Splitting (85%)

Omitted
Correct answer
F

85%
Answered correctly

01 sec
Time Spent

07/06/2020
Last Updated

Explanation

Key defense mechanisms	
	• Acting out: Expressing unacceptable feelings through actions • Denial: Behaving as if an aspect of reality does not exist

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Key defense mechanisms	
Immature	• Acting out: Expressing unacceptable feelings through actions • Denial: Behaving as if an aspect of reality does not exist • Displacement: Transferring feelings to less threatening object/person • Intellectualization: Focusing on nonemotional aspects to avoid distressing feelings • Passive aggression: Avoiding conflict by expressing hostility covertly • Projection: Attributing one's own feelings to others • Rationalization: Justifying behavior to avoid difficult truths • Reaction formation: Transforming unacceptable feelings/impulses into the opposite • Regression: Reverting to earlier developmental stage • Splitting: Experiencing a person/situation as either all positive or all negative
Mature	• Sublimation: Channeling impulses into socially acceptable behaviors • Suppression: Putting unwanted feelings aside to cope with reality

Defense mechanisms are unconscious means of responding and adapting to situations to minimize anxiety and promote self-preservation. **Splitting** is a defense mechanism that involves **experiencing the self or others in extremes**, either all positive or all negative, which allows "bad" qualities to be completely separated from the "good." Although splitting provides a less complicated way of looking at people and situations, it prevents the integration of positive and negative qualities into a cohesive whole, resulting in unpredictable fluctuations between the two extremes.

In this situation, the patient initially idealizes the surgeon but later characterizes her as the opposite extreme when frustrated and disappointed that she is running late. Splitting is commonly seen in **borderline personality disorder** and can contribute to the unstable relationships and mood instability that exemplify this disorder.

(Choice A) Acting out refers to the expression of unacceptable thoughts or impulses through actions (eg, if this patient reacted by tearing up her discharge paperwork or throwing her food tray at the nurse).

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(Choice A) Acting out refers to the expression of unacceptable thoughts or impulses through actions (eg, if this patient reacted by tearing up her discharge paperwork or throwing her food tray at the nurse).

(Choice B) In displacement, negative feelings associated with a person or situation are transferred to a less threatening object or person (eg, if this patient said the nurse was "terrible" and unresponsive to her needs when in fact it is how she feels about the surgeon).

(Choice C) Passive aggression involves expressing hostility indirectly in an unassertive way (eg, if this patient expressed her anger by remaining noncommunicative during the discharge process or deliberately neglected to sign her discharge papers).

(Choice D) In projection, one's own unacceptable thoughts or feelings are perceived as coming from someone else (eg, if this patient on the day of discharge felt that the surgeon was angry with her).

(Choice E) Reaction formation is the redirection of an unacceptable impulse into its opposite (eg, if this patient sent the physician a thank-you note and lavish gift instead of expressing her anger).

Educational objective:
Splitting is a defense mechanism that involves organizing experiences of the self or others into extremes to keep positive and negative aspects separated. It is commonly seen in patients with borderline personality disorder.

References

- Defense mechanisms reported by patients with borderline personality disorder and axis II comparison subjects over 16 years of prospective

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A 23-year-old woman comes to the emergency department due to right wrist pain after a fall. The patient fell onto her outstretched hand while walking across the floor at a gym where she exercises regularly. She has no significant medical history and takes no medications. The patient says she has tried several diets to lose weight and is currently consuming a vegan diet. Her last menstrual period was 3 months ago. She does not use tobacco, alcohol, or illicit drugs. Temperature is 36.1 C (97 F), blood pressure is 90/58 mm Hg, and pulse is 50/min. BMI is 18.3 kg/m^2. Weight is 50 kg (110.2 lb) and height is 165 cm (5 ft 5 in). Physical examination shows tenderness and swelling over the distal radius. The parotid glands are enlarged and there are fine, soft hairs on her extremities. Urine pregnancy test is negative. X-rays reveal a nondisplaced fracture of the right distal radius and generalized radiolucency of the bone. Which of the following is the most likely diagnosis?

- A. Anorexia nervosa
- B. Avoidant/restrictive food intake disorder
- C. Bulimia nervosa
- D. Pellagra
- E. Rickets
- F. Scurvy

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- ✓ A. Anorexia nervosa (66%)
- B. Avoidant/restrictive food intake disorder (6%)
- C. Bulimia nervosa (23%)
- D. Pellagra (0%)
- E. Rickets (2%)
- F. Scurvy (1%)

Omitted
Correct answer
A

66%
Answered correctly

02 secs
Time Spent

03/31/2020
Last Updated

Explanation

Anorexia nervosa

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Anorexia nervosa	
Epidemiology	• Increased risk in whites, industrialized countries, athletes, models • Median onset at age 18 • 10:1 female/male ratio
DSM-5 diagnostic criteria	• Restricted energy intake with significantly **low body weight** (BMI generally <18.5 kg/m^2) • Intense **fear of becoming fat** or persistent avoidance of weight gain • **Distorted body image**, excessive influence of weight on self-worth, or persistent denial of complications related to low body weight
Medical complications	• Osteoporosis • Amenorrhea • Lanugo or hair loss • Parotid hypertrophy (if binge/purge behavior) • Hypotension, hypothermia, bradycardia • Cardiac atrophy, arrhythmias

This patient has a fragility fracture (ie, fracture due to low-energy trauma) and radiolucency of bone on x-ray, suggesting **osteoporosis**. In light of her restricted diet, thin body habitus, and cessation of menses, this is likely due to a low-estrogen state and **functional hypothalamic amenorrhea** (excessive exercise or weight loss suppresses secretion of GnRH, leading to decreased release of FSH and low estrogen levels). She also has vital sign abnormalities (eg, bradycardia, low body temperature) and lanugo (ie, fine, downy body hair) that together raise suspicion for **anorexia nervosa** (AN).

AN is characterized by **restriction of energy intake** below that needed to maintain normal body weight (BMI typically <18.5 kg/m^2), leading to an emaciated body habitus and clinical features of starvation. Patients with AN have a distorted body image and an intense fear of gaining weight or becoming fat. Common behaviors include excessive caloric restriction, intensive exercise, and binge eating/purging (eg, self-induced vomiting, misuse of laxatives or diuretics).

(Choice B) Avoidant/restrictive food intake disorder is characterized by inadequate food intake due to lack of interest in eating, dislike of the

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(Choice B) Avoidant/restrictive food intake disorder is characterized by inadequate food intake due to lack of interest in eating, dislike of the sensory experience of eating, or concerns about the consequences of eating without an associated disturbance in body image. This disorder typically presents in childhood or adolescence, and patients do not have signs of recurrent vomiting (eg, parotid hypertrophy, as in this patient).

(Choice C) Bulimia nervosa is characterized by recurrent binge eating/purging and preoccupation with body image, much like in many patients with AN. However, patients with bulimia maintain their body weight at or above the minimally normal level and do not experience the signs of starvation that are present in this patient.

(Choice D) Pellagra (ie, niacin deficiency) is characterized by dementia, dermatitis, and diarrhea.

(Choice E) Vegan diets, which are free from animal products, can increase the risk for deficiencies of vitamin B_{12}, calcium, and vitamin D. Vitamin D deficiency may lead to low bone density and fragility fracture. However, rickets involves deficient mineralization and disruption of the growth plates and only occurs in children.

(Choice F) Scurvy (ie, vitamin C deficiency) is characterized by skin and mucosal hemorrhages, intraarticular bleeding, gingival swelling, impaired wound healing, and weakened immune response to local infections. Vitamin C is readily found in plant products; a vegan diet would not predispose to scurvy.

Educational objective:
Anorexia nervosa is an eating disorder characterized by low body weight, intense fear of becoming fat, and distorted body image. Medical complications due to starvation in anorexia include bradycardia, hypotension, osteoporosis, and amenorrhea.

References

- Bone health in anorexia nervosa.

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A medical student just finished the USMLE Step 1 exam and is anxious about her performance. She is especially unnerved when fellow students talk about the difficulty of the exam and discuss their answers to certain questions. The student decides not to think about the exam until her score arrives because "worrying isn't going to change the result." She is delighted when she receives a very high score several weeks later. Before receiving the result, the student exhibited which of the following defense mechanisms?

A. Denial
B. Dissociation
C. Intellectualization
D. Rationalization
E. Reaction formation
F. Repression
G. Suppression

Submit

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- A. Denial (1%)
- B. Dissociation (2%)
- C. Intellectualization (5%)
- D. Rationalization (12%)
- E. Reaction formation (1%)
- F. Repression (4%)
- ✓ G. Suppression (72%)

Omitted
Correct answer
G

72%
Answered correctly

02 secs
Time Spent

01/13/2020
Last Updated

Explanation

Key defense mechanisms	
	• Acting out: Expressing unacceptable feelings through actions

Explanation

Key defense mechanisms	
Immature	• Acting out: Expressing unacceptable feelings through actions • Denial: Behaving as if an aspect of reality does not exist • Displacement: Transferring feelings to less threatening object/person • Intellectualization: Focusing on nonemotional aspects to avoid distressing feelings • Passive aggression: Avoiding conflict by expressing hostility covertly • Projection: Attributing one's own feelings to others • Rationalization: Justifying behavior to avoid difficult truths • Reaction formation: Transforming unacceptable feelings/impulses into the opposite • Regression: Reverting to earlier developmental stage • Splitting: Experiencing a person/situation as either all positive or all negative
Mature	• Sublimation: Channeling impulses into socially acceptable behaviors • Suppression: Putting unwanted feelings aside to cope with reality

Defense mechanisms are means of protecting oneself from awareness of uncomfortable feelings. They can be classified as immature or mature. Immature defense mechanisms (eg, denial, acting out, regression, splitting) are maladaptive and generally seen in children and in psychopathologic states. Mature defense mechanisms (eg, altruism, sublimation, suppression, humor) are more often used by adults and allow for a healthy, adaptive response to emotional distress.

This student is using **suppression** to alleviate anxiety about her exam results as she is aware of her discomfort but decides not to attend to it. Suppression is a **mature defense mechanism** in which an individual **intentionally puts aside** unpleasant thoughts or **feelings** to better cope with the present reality.

Suppression should not be confused with repression **(Choice F)**, in which unacceptable thoughts or feelings are blocked from entering conscious awareness (eg, an adult who was sexually abused as a child unconsciously buries feelings about the trauma).

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	• Suppression: Putting unwanted feelings aside to cope with reality

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Suppression should not be confused with repression **(Choice F)**, in which unacceptable thoughts or feelings are blocked from entering conscious awareness (eg, an adult who was sexually abused as a child unconsciously buries feelings about the trauma).

(Choice A) Denial involves avoiding awareness of an external reality (eg, a student who has failed an exam denies having done so).

(Choice B) Dissociation is an immature defense in which a transient disruption to memory, identity, and/or consciousness occurs as a way to cope with a distressing event (eg, this student does not remember taking the exam and feels numb when her peers discuss the questions).

(Choice C) Intellectualization is an immature defense mechanism that involves focusing on nonemotional components of a distressing event to make it more tolerable (eg, this student becomes preoccupied with thinking about the passing rates and other statistics of the exam).

(Choice D) Rationalization involves making excuses for unacceptable feelings or situations (eg, a student explaining that poor performance on an exam was due to the trickiness of the questions).

(Choice E) Reaction formation involves unconsciously transforming an unacceptable thought or feeling into its opposite (eg, a student hiding fears of failing the exam by being overly confident).

Educational objective:
Suppression is a mature defense mechanism involving a conscious choice not to dwell on a particular thought or feeling.

References

- Change in coping and defense mechanisms across adulthood: longitudinal findings in a European-American sample.

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for a healthy, adaptive response to emotional distress.

This student is using **suppression** to alleviate anxiety about her exam results as she is aware of her discomfort but decides not to attend to it. Suppression is a **mature defense mechanism** in which an individual **intentionally puts aside** unpleasant thoughts or **feelings** to better cope with the present reality.

Suppression should not be confused with repression **(Choice F)**, in which unacceptable thoughts or feelings are blocked from entering conscious awareness (eg, an adult who was sexually abused as a child unconsciously buries feelings about the trauma).

(Choice A) Denial involves avoiding awareness of an external reality (eg, a student who has failed an exam denies having done so).

(Choice B) Dissociation is an immature defense in which a transient disruption to memory, identity, and/or consciousness occurs as a way to cope with a distressing event (eg, this student does not remember taking the exam and feels numb when her peers discuss the questions).

(Choice C) Intellectualization is an immature defense mechanism that involves focusing on nonemotional components of a distressing event to make it more tolerable (eg, this student becomes preoccupied with thinking about the passing rates and other statistics of the exam).

(Choice D) Rationalization involves making excuses for unacceptable feelings or situations (eg, a student explaining that poor performance on an exam was due to the trickiness of the questions).

(Choice E) Reaction formation involves unconsciously transforming an unacceptable thought or feeling into its opposite (eg, a student hiding fears of failing the exam by being overly confident).

Educational objective:
Suppression is a mature defense mechanism involving a conscious choice not to dwell on a particular thought or feeling.

References

- Change in coping and defense mechanisms across adulthood: longitudinal findings in a European-American sample.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Defense mechanisms
Subject	System	Topic

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A 35-year-old woman comes to the office for evaluation of anxiety. The patient works as a mechanical engineer and recently declined a promotion to be a project manager. Although her salary would have increased significantly, she felt that overseeing other employees and leading team meetings would be too stressful. She says, "If something were to go wrong, everyone would blame me. I don't even know why they offered me this position." The patient enjoys her job but tends to eat lunch by herself because she feels that her coworkers do not like her appearance or sense of humor. She has never had a long-term romantic partner but fantasizes about getting married someday. The patient lives alone, rarely socializes with friends, and is close with her mother, whom she describes as "the person I can always rely on no matter what." Which of the following is the most likely diagnosis?

A. Acute stress disorder
B. Adjustment disorder with anxiety
C. Antisocial personality disorder
D. Avoidant personality disorder
E. Generalized anxiety disorder
F. Paranoid personality disorder
G. Schizoid personality disorder

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A. Acute stress disorder (0%)
B. Adjustment disorder with anxiety (1%)
C. Antisocial personality disorder (3%)
✓ D. Avoidant personality disorder (82%)
E. Generalized anxiety disorder (5%)
F. Paranoid personality disorder (2%)
G. Schizoid personality disorder (4%)

Omitted
Correct answer
D

82%
Answered correctly

02 secs
Time Spent

06/29/2020
Last Updated

Explanation

DSM-5 personality disorders	
Cluster A Odd/eccentric	• **Paranoid:** suspicious, distrustful, hypervigilant • **Schizoid:** prefers to be a loner, detached, unemotional • **Schizotypal:** unusual thoughts, perceptions & behavior
Cluster B Dramatic/erratic	• **Antisocial:** disregard & violation of the rights of others • **Borderline:** chaotic relationships, abandonment fears, labile mood, impulsivity, inner emptiness, self-harm • **Histrionic:** superficial, theatrical, attention-seeking • **Narcissistic:** grandiosity, lack of empathy
Cluster C Anxious/fearful	• **Avoidant:** avoidance due to fears of criticism & rejection • **Dependent:** submissive, clingy, needs to be taken care of • **Obsessive-compulsive:** rigid, controlling, perfectionistic

This patient's pattern of avoiding social interactions and hypersensitivity to criticism is characteristic of **avoidant personality disorder**. Patients with this disorder typically have very limited social relationships due to the **fear of being judged**, embarrassed, or rejected. They desire social acceptance and may fantasize about having relationships, as in this patient; however, they struggle with **feelings of inadequacy** and pursue relationships only if certain of absolute acceptance by others. Occupational dysfunction due to difficulties interacting with coworkers or turning down promotions due to fear of criticism is common.

(Choice A) Acute stress disorder involves exposure to a life-threatening event with resulting flashbacks, intrusive memories, avoidance, negative mood, hyperarousal, and dissociation from reality.

(Choice B) In adjustment disorder with anxiety, a disproportionate level of worry develops within 3 months of onset of an identifiable stressor. This patient's chronic anxiety symptoms appear to be related to a longstanding fear of rejection in social situations and low self-esteem, which is more consistent with avoidant personality disorder.

(Choice C) Antisocial personality disorder is marked by persistent disregard for and violation of the rights of others. Individuals with this disorder

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(Choice A) Acute stress disorder involves exposure to a life-threatening event with resulting flashbacks, intrusive memories, avoidance, negative mood, hyperarousal, and dissociation from reality.

(Choice B) In adjustment disorder with anxiety, a disproportionate level of worry develops within 3 months of onset of an identifiable stressor. This patient's chronic anxiety symptoms appear to be related to a longstanding fear of rejection in social situations and low self-esteem, which is more consistent with avoidant personality disorder.

(Choice C) Antisocial personality disorder is marked by persistent disregard for and violation of the rights of others. Individuals with this disorder are often risk-takers who exhibit criminal behavior.

(Choice E) Generalized anxiety disorder is characterized by excessive worry about multiple issues and is associated with irritability, restlessness, muscle tension, fatigue, sleep disturbance, and difficulty concentrating. This patient's anxiety is more consistent with avoidant personality disorder because it revolves around a fear of judgment by others and feelings of inadequacy, resulting in a pattern of social avoidance.

(Choice F) Paranoid personality disorder involves a pattern of distrust and suspiciousness of others' motives. Patients with this disorder also avoid relationships and socialization, but do so because they are concerned about personal information being used to exploit them.

(Choice G) Individuals with schizoid personality disorder are also socially avoidant, but they tend to be content with their social isolation. Patients with this disorder are emotionally detached, have a limited range of affect, do not desire social acceptance, and prefer to be alone.

Educational objective:
Avoidant personality disorder is a maladaptive pattern of behavior characterized by social inhibition, feelings of inadequacy, and fear of embarrassment and rejection.

References

- Avoidant personality disorder: current insights.
- Personality functioning in patients with avoidant personality disorder and social phobia.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Personality disorders
Subject	System	Topic

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A 45-year-old woman with type 2 diabetes mellitus, obesity, and hypertension comes to the office for a routine follow-up visit. Her medications include a sulfonylurea and ACE inhibitor. The patient has lost 2.3 kg (5 lb) and credits a new energy and weight loss supplement. She purchased the supplement over the Internet on the recommendation of a friend and believes that it contains caffeine and several herbs that promote weight loss. The patient has had no problems tolerating the supplement. Blood pressure is 140/90 mm Hg and pulse is 88/min. Which of the following is the most appropriate response by the physician?

A. Advise the patient to avoid the supplement and engage in other forms of weight loss

B. Advise the patient to limit the use of other caffeine-containing products

C. Explain that weight loss due to dietary supplements is unlikely to be sustainable

D. Offer to review the ingredients with the patient and discuss the potential risks of supplements

E. Respect the patient's decision and follow her closely

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- A. Advise the patient to avoid the supplement and engage in other forms of weight loss (2%)
- B. Advise the patient to limit the use of other caffeine-containing products (2%)
- C. Explain that weight loss due to dietary supplements is unlikely to be sustainable (1%)
- ✓ D. Offer to review the ingredients with the patient and discuss the potential risks of supplements (84%)
- E. Respect the patient's decision and follow her closely (9%)

Omitted
Correct answer
D

84%
Answered correctly

02 secs
Time Spent

02/03/2020
Last Updated

Explanation

Patients commonly use **herbal** preparations and **dietary supplements**. Although the US Food and Drug Administration (FDA) regulates dietary supplements, the regulations are less strict than those for prescription and over-the-counter medications. Some herbal products have established safety and/or efficacy, but there are **few quality assurances** regarding the content and purity of many herbal supplements, and unknown toxic ingredients may cause **adverse effects** and dangerous **drug interactions**. For example, the herbal supplement ephedra, marketed as a diet pill and energy booster, was banned by the FDA in 2004 due to the risk of cardiovascular complications (eg, increased blood pressure, myocardial

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Explanation

Patients commonly use **herbal** preparations and **dietary supplements**. Although the US Food and Drug Administration (FDA) regulates dietary supplements, the regulations are less strict than those for prescription and over-the-counter medications. Some herbal products have established safety and/or efficacy, but there are **few quality assurances** regarding the content and purity of many herbal supplements, and unknown toxic ingredients may cause **adverse effects** and dangerous **drug interactions**. For example, the herbal supplement ephedra, marketed as a diet pill and energy booster, was banned by the FDA in 2004 due to the risk of cardiovascular complications (eg, increased blood pressure, myocardial infarction, stroke). However, ephedra-containing products are still readily available through the Internet.

It is important for physicians to **routinely inquire** about the use of these products, both to understand why patients are using them and to evaluate the risks and benefits of continued use. This patient should be supported in her weight-loss efforts and her use of supplements should not be immediately dismissed. The physician should instead **assess the ingredients** for contraindications or drug interactions and then provide **counsel regarding the potential risks**, especially given her medical history.

(Choice A) Although the physician should work with the patient to develop a comprehensive weight-loss plan, including behavioral approaches to weight loss, this response is dismissive and does not take into account the use of supplements, which this patient is likely to continue taking.

(Choices B and E) Supporting the patient's continued use of the supplement or merely cautioning her to avoid additional caffeine, without assessing the supplement for dangerous ingredients such as ephedra, does not adequately address safety concerns.

(Choice C) The patient may interpret this response as discouraging her efforts to lose weight, negatively impacting rapport with the physician. In addition, it does not address the risks or benefits of the supplement itself.

Educational objective:
Physicians should routinely ask their patients about the use of herbal preparations and nutritional supplements and advise them on the quality, safety, and efficacy of these products.

References

- Reduction in ephedra poisonings after FDA ban.
- Overview of regulation of dietary supplements in the USA and issues of adulteration with phenethylamines (PEAs).
- An overview of herb and dietary supplement efficacy, safety and government regulations in the United States with suggested improvements.

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A 28-year-old man comes to the office at his wife's insistence. He reports severe insomnia but otherwise feels physically healthy. His wife is concerned that the patient is having a difficult time since returning from military duty. She says, "He used to be so upbeat and easygoing. Now his moods fluctuate between really tense and on edge to detached and numb." The patient cannot fall asleep at night because, as soon as he closes his eyes, he sees the horrific scene of his friend being blown up after stepping on a landmine. During the day, he is hypersensitive to loud sounds such as firecrackers or a car backfiring. The patient says, "Sometimes I feel as if I'm back in combat and have to duck and take cover." Vital signs are within normal limits, and physical examination shows no abnormalities. On mental status examination, the patient has an anxious mood and blunted affect. Which of the following is the most appropriate pharmacotherapy?

A. Antipsychotic
B. Benzodiazepine
C. Monoamine oxidase inhibitor
D. Mood stabilizer
E. Non-benzodiazepine hypnotic
F. Selective serotonin reuptake inhibitor
G. Tricyclic antidepressant

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A. Antipsychotic (1%)
B. Benzodiazepine (8%)
C. Monoamine oxidase inhibitor (1%)
D. Mood stabilizer (3%)
E. Non-benzodiazepine hypnotic (2%)
✓ F. Selective serotonin reuptake inhibitor (80%)
G. Tricyclic antidepressant (2%)

Omitted
Correct answer
F

80%
Answered correctly

02 secs
Time Spent

06/29/2020
Last Updated

Explanation

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Posttraumatic stress disorder	
Clinical features	• Exposure to life-threatening trauma • Nightmares, flashbacks, intrusive memories • Avoidance of reminders, dissociation • Emotional detachment, negative mood, decreased interest in activities • Sleep disturbance, hypervigilance, irritability • Duration ≥1 month
Treatment	• Trauma-focused cognitive-behavioral therapy • Antidepressants (SSRIs, SNRIs)

SNRI = serotonin-norepinephrine reuptake inhibitor; **SSRI** = selective serotonin reuptake inhibitor.

This patient's sleep disturbance, tense moods, feelings of detachment, intrusive images, hypervigilance, and flashbacks are characteristic of **post-traumatic stress disorder** (PTSD). First-line treatment consists of trauma-focused cognitive behavioral therapy and antidepressant medication. **Selective serotonin reuptake inhibitors (SSRIs)** have the best evidence for efficacy, and serotonin-norepinephrine reuptake inhibitors (SNRIs) are also commonly used. Although patients with PTSD commonly experience anxiety, hyperarousal, and insomnia, there is little evidence to support the use of benzodiazepines and non-benzodiazepine hypnotics **(Choices B and E)**.

(Choice A) Antipsychotics are not a first-line treatment for PTSD. They may have a limited role as augmentation in patients who have inadequate response to an SSRI/SNRI.

(Choices C and G) The older antidepressants (monoamine oxidase inhibitors and tricyclic antidepressants) are used as second-line treatments for depression, but they have not been shown to be effective in PTSD.

(Choice D) Mood stabilizers (eg, lithium, anticonvulsants with mood-stabilizing properties) have a major role in treating bipolar disorders, but they have not proven effective in treating PTSD.

Educational objective:

	• Antidepressants (SSRIs, SNRIs)

SNRI = serotonin-norepinephrine reuptake inhibitor; **SSRI** = selective serotonin reuptake inhibitor.

This patient's sleep disturbance, tense moods, feelings of detachment, intrusive images, hypervigilance, and flashbacks are characteristic of **post-traumatic stress disorder** (PTSD). First-line treatment consists of trauma-focused cognitive behavioral therapy and antidepressant medication. **Selective serotonin reuptake inhibitors (SSRIs)** have the best evidence for efficacy, and serotonin-norepinephrine reuptake inhibitors (SNRIs) are also commonly used. Although patients with PTSD commonly experience anxiety, hyperarousal, and insomnia, there is little evidence to support the use of benzodiazepines and non-benzodiazepine hypnotics **(Choices B and E)**.

(Choice A) Antipsychotics are not a first-line treatment for PTSD. They may have a limited role as augmentation in patients who have inadequate response to an SSRI/SNRI.

(Choices C and G) The older antidepressants (monoamine oxidase inhibitors and tricyclic antidepressants) are used as second-line treatments for depression, but they have not been shown to be effective in PTSD.

(Choice D) Mood stabilizers (eg, lithium, anticonvulsants with mood-stabilizing properties) have a major role in treating bipolar disorders, but they have not proven effective in treating PTSD.

Educational objective:
First-line treatment for post-traumatic stress disorder includes trauma-focused cognitive-behavioral therapy and antidepressant medication. Selective serotonin reuptake inhibitors have the best evidence for efficacy.

References

- Evidence-based pharmacotherapy of post-traumatic stress disorder (PTSD).
- Pharmacotherapy for post-traumatic stress disorder: systematic review and meta-analysis.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Post traumatic stress disorder
Subject	System	Topic

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A 45-year-old man comes to the office due to chronic insomnia. The patient has trouble sleeping because he claims he must remain alert to protect himself from workers at a nearby chemical plant. He says they are poisoning him by secretly dumping toxic waste in his backyard at night. The patient's wife says, "He's been like this for the past 10 years. He gets very upset when asked for proof, so he's going to install cameras next week." She has never seen any unusual activity in the backyard and says that her husband has never received an actual threat or endured actual harm. He has ordered numerous soil toxicity tests over the years, all of which have been negative. The patient started working as a taxi driver at age 21 and continues to work for the same company. He has no history of psychiatric treatment. Which of the following is the most likely diagnosis for this patient?

A. Delusional disorder
B. Major depressive disorder with psychotic features
C. Paranoid personality disorder
D. Schizophrenia
E. Schizophreniform disorder
F. Schizotypal personality disorder

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- ✓ A. Delusional disorder (54%)
- B. Major depressive disorder with psychotic features (0%)
- C. Paranoid personality disorder (31%)
- D. Schizophrenia (8%)
- E. Schizophreniform disorder (1%)
- F. Schizotypal personality disorder (2%)

Omitted
Correct answer
A

54%
Answered correctly

02 secs
Time Spent

02/16/2020
Last Updated

Explanation

Delusional disorder

Delusional disorder	
Clinical features	• ≥1 delusions for ≥1 months • Other psychotic symptoms absent or not prominent • Behavior not obviously odd/bizarre; ability to function apart from delusion's impact • Subtypes: erotomanic, grandiose, jealous, persecutory & somatic
Differential diagnosis	• Schizophrenia: other psychotic symptoms present (eg, hallucinations, disorganization, negative symptoms); greater functional impairment • Personality disorders: pervasive pattern of suspiciousness (paranoid), grandiosity (narcissistic), or odd beliefs (schizotypal), but no clear delusions
Treatment	• Antipsychotics • Cognitive-behavioral therapy

This patient's persistent belief that he is being poisoned is consistent with **delusional disorder**, which is characterized by **≥1 delusions** for **≥1 months**. Other positive psychotic symptoms, such as **hallucinations** and **disorganization**, are **absent**. Apart from the direct impact of the delusions (eg, this patient's insomnia, repeated soil testing), overall behavior in patients with delusional disorder is not obviously bizarre or odd, and general functioning is not significantly impaired (eg, this patient has a stable relationship and employment).

Patients with delusional disorder typically have a persistent, overriding delusion with a specific theme. The diagnosis is further classified based on the type of belief: erotomanic (believing someone is in love with them), grandiose (believing they have great talent, insights, or achievements), jealous (believing their partner is unfaithful), persecutory (believing they are being cheated, spied on, poisoned, or harassed), or somatic (believing bodily functions and sensations are abnormal).

(Choice B) Major depressive disorder with psychotic features can present with delusions as well as insomnia; however, this patient lacks other characteristic depressive symptoms (eg, persistent low mood, amotivation, fatigue, worthlessness), and his symptoms have not caused significant impairment in daily functioning.

(Choices C and F) Personality disorders involve persistent patterns of behavior usually arising in early adulthood. They are pervasive across a broad range of situations (eg, interpersonal, vocational) but do not involve specific delusions (eg, persistent false, fixed beliefs). Paranoid

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Patients with delusional disorder typically have a persistent, overriding delusion with a specific theme. The diagnosis is further classified based on the type of belief: erotomanic (believing someone is in love with them), grandiose (believing they have great talent, insights, or achievements), jealous (believing their partner is unfaithful), persecutory (believing they are being cheated, spied on, poisoned, or harassed), or somatic (believing bodily functions and sensations are abnormal).

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(Choices C and F) Personality disorders involve persistent patterns of behavior usually arising in early adulthood. They are pervasive across a broad range of situations (eg, interpersonal, vocational) but do not involve specific delusions (eg, persistent false, fixed beliefs). Paranoid personality disorder is characterized by overarching suspiciousness or distrust (eg, if this patient were generally distrustful of many people, including the chemical plant workers, but did not have fixed beliefs that they were poisoning him). Schizotypal personality disorder is characterized by eccentric behavior and odd thoughts and perceptions but no clear delusions.

(Choices D and E) Schizophrenia (≥6 months) and schizophreniform disorder (≥1 month and <6 months) are characterized by ≥2 of the following: delusions, hallucinations, disorganized speech, grossly disorganized or catatonic behavior, and negative symptoms. In contrast, patients with delusional disorder have delusions but no other psychotic symptoms.

Educational objective:
Delusional disorder is characterized by ≥1 delusions for ≥1 months in the absence of other psychotic symptoms. Behavior is not obviously bizarre, and functioning is not significantly impaired apart from the direct impact of the delusions.

References

- Schizophrenia and other psychotic disorders in DSM-5.
- Treatments for delusional disorder.

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A 28-year-old man is hospitalized due to the acute onset of severe depression and suicidal ideation for several days. He was recently thrown out of his mother's home after stealing her money to support his drug habit. The patient reports fatigue and vivid, disturbing dreams. The nursing staff note that he is irritable, withdrawn, hypersomnolent, and hyperphagic. The patient has an extensive history of substance abuse and has been hospitalized previously for alcohol detoxification. Blood pressure is 110/80 mm Hg and pulse is 64/min. Physical examination shows old injuries from a motorcycle accident but no other abnormalities. On mental status examination, he appears lethargic and dysphoric. This patient's current symptoms are most likely the result of which of the following conditions?

A. Alcohol withdrawal
B. Benzodiazepine withdrawal
C. Cannabis withdrawal
D. Cocaine withdrawal
E. Major depressive disorder
F. Opiate withdrawal

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- A. Alcohol withdrawal (8%)
- B. Benzodiazepine withdrawal (6%)
- C. Cannabis withdrawal (14%)
- ✓ D. Cocaine withdrawal (54%)
- E. Major depressive disorder (6%)
- F. Opiate withdrawal (9%)

Omitted
Correct answer
D

54%
Answered correctly

02 secs
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02/23/2020
Last Updated

Explanation

Common withdrawal syndromes		
Substance	Symptoms	Examination findings

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Common withdrawal syndromes		
Substance	**Symptoms**	**Examination findings**
Alcohol	Tremors, agitation, anxiety, **delirium**, psychosis	**Seizures**, tachycardia, palpitations
Benzodiazepines	Tremors, anxiety, perceptual disturbances, psychosis, insomnia	
Heroin	Nausea, vomiting, abdominal cramping, diarrhea, muscle aches	**Dilated pupils**, **yawning**, piloerection, **lacrimation**, hyperactive bowel sounds
Stimulants (eg, cocaine, amphetamines)	Increased appetite, hypersomnia, **intense psychomotor retardation, severe depression ("crash")**	No significant findings
Nicotine	Dysphoria, irritability, anxiety, **increased appetite**	
Cannabis	Irritability, anxiety, depressed mood, insomnia, decreased appetite	No significant findings

This patient's **depression**, **fatigue**, **hypersomnia**, **hyperphagia**, and **vivid dreams** are characteristic of **cocaine withdrawal**. Symptoms occur within hours to days of cessation or reduction of heavy or prolonged use. Following a binge, patients may experience a period of acute, intense symptoms, including severe depression with suicidal ideation, pronounced lassitude (the "**crash**"), and drug cravings. In contrast to withdrawal from opiates, alcohol, and benzodiazepines, withdrawal from cocaine and other stimulants usually results in **minor physical symptoms**. No medication has proven to be effective in treating cocaine withdrawal, and treatment is supportive only.

	appetite	

This patient's **depression**, **fatigue**, **hypersomnia**, **hyperphagia**, and **vivid dreams** are characteristic of **cocaine withdrawal**. Symptoms occur within hours to days of cessation or reduction of heavy or prolonged use. Following a binge, patients may experience a period of acute, intense symptoms, including severe depression with suicidal ideation, pronounced lassitude (the "**crash**"), and drug cravings. In contrast to withdrawal from opiates, alcohol, and benzodiazepines, withdrawal from cocaine and other stimulants usually results in **minor physical symptoms**. No medication has proven to be effective in treating cocaine withdrawal, and treatment is supportive only.

(Choice A) Alcohol withdrawal is a medically serious syndrome characterized by initial symptoms of agitation, tremors, tachycardia, and hypertension (12-24 hours), with some patients progressing to seizures and delirium tremens.

(Choice B) Symptoms of benzodiazepine withdrawal include anxiety, insomnia, perceptual disturbances, tachycardia, seizures, and psychosis.

(Choice C) Patients who cease heavy and prolonged cannabis use may have irritability, anxiety, depressed mood, insomnia, restlessness, and decreased appetite. Nonspecific physical symptoms such as muscle aches may also be present.

(Choice E) Insufficient duration of symptoms and probable relationship to substance use make major depressive disorder less likely.

(Choice F) Opioid withdrawal is characterized by abdominal cramps, nausea, vomiting, yawning, muscle aches, piloerection, lacrimation, and dilated pupils. Although withdrawal is uncomfortable, it is generally not life-threatening.

Educational objective:
Cocaine withdrawal is characterized by the development of acute depression accompanied by fatigue, hypersomnia, hyperphagia, and vivid dreams.

References

- Substance use, intoxication, and withdrawal in the critical care setting.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Cocaine
Subject	System	Topic

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A 20-year-old college student comes to the office due to fatigue and decreased exercise tolerance. She says, "I used to run 5 miles every day, but for the past month I get out of breath after running 3 miles. I need to keep running so I don't get any fatter than I already am." The patient also reports difficulty concentrating in class, depressed mood, constipation, and abdominal bloating. Her appetite is normal, but she admits to occasionally forcing herself to vomit to prevent weight gain. Physical examination is significant for dry skin, painless bilateral parotid swelling, pharyngeal erythema, and hypoactive bowel sounds. Temperature is 36.2 C (97.2 F), blood pressure is 100/60 mm Hg, pulse is 62/min, and respirations are 16/min. BMI is 17.5 kg/m^2. Which of the following is the most likely diagnosis?

A. Anorexia nervosa
B. Body dysmorphic disorder
C. Bulimia nervosa
D. Hypothyroidism
E. Irritable bowel syndrome
F. Major depressive disorder

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A 20-year-old college student comes to the office due to fatigue and decreased exercise tolerance. She says, "I used to run 5 miles every day, but for the past month I get out of breath after running 3 miles. I need to keep running so I don't get any fatter than I already am." The patient also reports difficulty concentrating in class, depressed mood, constipation, and abdominal bloating. Her appetite is normal, but she admits to occasionally forcing herself to vomit to prevent weight gain. Physical examination is significant for dry skin, painless bilateral parotid swelling, pharyngeal erythema, and hypoactive bowel sounds. Temperature is 36.2 C (97.2 F), blood pressure is 100/60 mm Hg, pulse is 62/min, and respirations are 16/min. BMI is 17.5 kg/m^2. Which of the following is the most likely diagnosis?

- ✓ A. Anorexia nervosa (67%)
- B. Body dysmorphic disorder (2%)
- C. Bulimia nervosa (27%)
- D. Hypothyroidism (2%)
- E. Irritable bowel syndrome (0%)
- F. Major depressive disorder (0%)

Omitted
Correct answer
A

67%
Answered correctly

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01/27/2020
Last Updated

Explanation

Anorexia nervosa & bulimia nervosa	
	• Significantly low weight

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Anorexia nervosa & bulimia nervosa	

Anorexia nervosa	• Significantly low weight
	• Intense fears of gaining weight/distorted body image
	• Subtypes:
	  ◦ Binge/purge
	  ◦ Restricting (dieting, fasting, excessive exercise)

Bulimia nervosa	• Weight within or above normal range • Preoccupation with weight & shape • Binge eating & compensatory behavior (purging, exercise, fasting, laxatives)

This patient's low body weight, distorted body perception, and findings consistent with self-induced vomiting (pharyngeal erythema, parotid hypertrophy) are suggestive of **anorexia nervosa**. Significantly **low body weight** (BMI ≤18.5 kg/m^2 in adults) is a core feature of anorexia nervosa and is accompanied by a **distorted body image** and **fear of weight gain**. There are two subtypes of anorexia. In the restricting subtype, patients fast and exercise excessively but do not purge. In the **binge eating/purging subtype**, patients engage in vomiting and/or use substances (laxatives, enemas, or diuretics) to avoid weight gain.

Findings on physical examination in AN include emaciation, bradycardia, hypotension, hypothermia, hair loss, dry skin, lanugo (fine, downy body hair), and abdominal distension. In the purging subtype, hypokalemia and alkalosis are often present due to repetitive vomiting.

(Choice B) In body dysmorphic disorder, patients display a preoccupation with a perceived or slight bodily defect. Dysmorphic disorder is not diagnosed when body distortion is accompanied by symptoms of an eating disorder (eg, low body weight, fear of weight gain).

(Choice C) Discrete periods of uncontrollable eating, with subsequent compensatory behavior (laxatives, diuretics, vomiting, excessive exercise), occur in bulimia nervosa. However, patients with this condition have a normal or increased body weight (in comparison with AN in which weight is significantly decreased).

(Choice D) Although constipation (hypoactive bowel sounds) and fatigue can also be seen in hypothyroidism, this patient's low weight, fear of gaining weight, distorted body image, and purging make anorexia nervosa more likely.

substances (laxatives, enemas, or diuretics) to avoid weight gain.

Findings on physical examination in AN include emaciation, bradycardia, hypotension, hypothermia, hair loss, dry skin, lanugo (fine, downy body hair), and abdominal distension. In the purging subtype, hypokalemia and alkalosis are often present due to repetitive vomiting.

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(Choice D) Although constipation (hypoactive bowel sounds) and fatigue can also be seen in hypothyroidism, this patient's low weight, fear of gaining weight, distorted body image, and purging make anorexia nervosa more likely.

(Choice E) Irritable bowel syndrome presents with chronic abdominal pain and altered bowel habits (diarrhea, constipation, or mixed-type). Patients often have abdominal bloating. This diagnosis would not explain signs of purging, distorted body image, and significantly low weight.

(Choice F) This patient does not meet the diagnostic criteria for major depressive disorder. Her depressed mood, fatigue, and poor concentration are consistent with the effects of malnutrition.

Educational objective:
Anorexia nervosa is characterized by a distorted body image and fear of weight gain despite significantly low body weight. Patients may restrict their food intake and/or binge and purge. The key in distinguishing anorexia nervosa from bulimia nervosa is abnormally low body weight.

References

- Initial evaluation, diagnosis, and treatment of anorexia nervosa and bulimia nervosa.
- Less symptomatic, but equally impaired: clinical impairment in restricting versus binge-eating/purging subtype of anorexia nervosa.
- Eating disorders in the primary care setting.

Behavioral science Psychiatric/Behavioral & Substance Abuse Anorexia nervosa

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A 38-year-old woman is brought to the emergency department after causing a disturbance in a department store. The patient says that the government was releasing poisonous gas through the air vents of the store and that red-colored clothing items were a signal to evacuate. She was arrested a year ago for a similar incident. The patient dropped out of college at age 20. She lives with her parents and has never worked. She smokes a pack of cigarettes a day but does not use alcohol or drugs. Physical examination is unremarkable. On mental status examination the patient appears distracted and fearful. She reports hearing the voices of two men who criticize her actions continuously and have done so for years. Which of the following abnormalities is most likely associated with this patient's symptoms?

A. Decreased dopamine activity in the mesolimbic pathway
B. Decreased dopamine activity in the nigrostriatal pathway
C. Decreased dopamine activity in the tuberoinfundibular pathway
D. Increased dopamine activity in the mesolimbic pathway
E. Increased dopamine activity in the nigrostriatal pathway
F. Increased dopamine activity in the tuberoinfundibular pathway

Submit

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- A. Decreased dopamine activity in the mesolimbic pathway (7%)
- B. Decreased dopamine activity in the nigrostriatal pathway (2%)
- C. Decreased dopamine activity in the tuberoinfundibular pathway (2%)
- ✓ D. Increased dopamine activity in the mesolimbic pathway (73%)
- E. Increased dopamine activity in the nigrostriatal pathway (8%)
- F. Increased dopamine activity in the tuberoinfundibular pathway (6%)

Omitted
Correct answer
D

73%
Answered correctly

02 secs
Time Spent

01/22/2020
Last Updated

Explanation

Dopaminergic pathways

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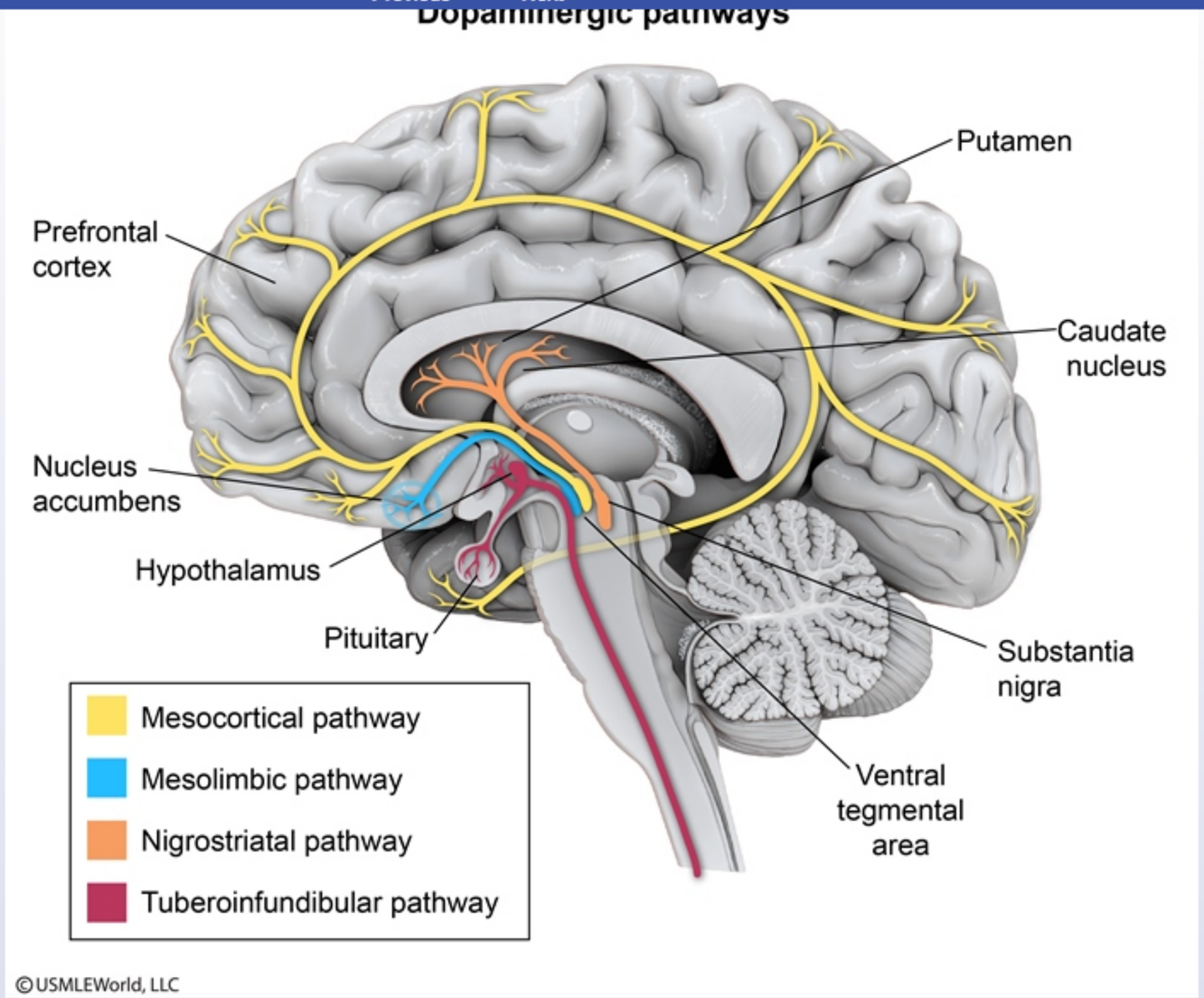

This patient likely has **schizophrenia**, a psychotic disorder with a prevalence of 1 percent worldwide. Her auditory hallucinations and delusions of being poisoned and receiving signals are characteristic **positive symptoms** of the disorder. Positive psychotic symptoms are thought to be

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This patient likely has **schizophrenia**, a psychotic disorder with a prevalence of 1 percent worldwide. Her auditory hallucinations and delusions of being poisoned and receiving signals are characteristic **positive symptoms** of the disorder. Positive psychotic symptoms are thought to be caused by an **excess of dopamine** in the **mesolimbic dopamine pathway**. The mesolimbic pathway projects from the ventral tegmental area to various regions throughout the limbic system.

The treatment of choice for schizophrenia is antipsychotic medication. Most antipsychotics are dopamine antagonists that produce their therapeutic effects (ie, decreased intensity of delusions and hallucinations) by decreasing dopamine activity in the mesolimbic pathway **(Choice A)**. Dopamine antagonism in the nigrostriatal and tuberoinfundibular pathways accounts for some of the common side effects of antipsychotics.

(Choices B and E) The nigrostriatal pathway extends from the substantia nigra to the basal ganglia and is involved in the coordination of movement. Decreased dopamine activity in the nigrostriatal pathway causes the extrapyramidal side effects of antipsychotics (eg, acute dystonic reactions, akathisia, drug-induced parkinsonism). Increased dopamine activity in the nigrostriatal pathway is thought to be involved in some movement disorders such as chorea and tics.

(Choices C and F) The tuberoinfundibular dopamine pathway projects from the hypothalamus to the pituitary gland. Normally, neurons in the tuberoinfundibular pathway secrete dopamine, which inhibits prolactin release from the anterior pituitary gland. Antipsychotics can cause hyperprolactinemia by blocking the inhibition of dopamine activity in the tuberoinfundibular pathway, resulting in amenorrhea, galactorrhea, gynecomastia, and sexual dysfunction.

Educational objective:
Positive symptoms of schizophrenia (eg, delusions, hallucinations) are associated with increased activity of dopamine in the mesolimbic pathway. Antipsychotics work by antagonizing dopamine receptors in this pathway.

References

- Does the dopamine hypothesis explain schizophrenia?

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Schizophrenia
Subject	System	Topic

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A 63-year-old man comes to the office for a follow-up examination of hypertension. At his last appointment, he revealed that he had increased his intake of 12-oz cans of beer from 3 to 6 cans a day due to stress at work. The physician advised him to seek help for his alcohol use as it could be causing his elevated blood pressure and has many negative health risks. The patient now tells the physician, "I thought about what you said. I know my alcohol use has gotten out of hand and is affecting my health. My wife and daughter also say that I need to quit. I have decided to look into options for treatment in my area." Which of the following best describes this patient's stage of behavioral change?

- A. Action
- B. Contemplation
- C. Intellectualization
- D. Maintenance
- E. Precontemplation
- F. Preparation
- G. Rationalization

Submit

A 63-year-old man comes to the office for a follow-up examination of hypertension. At his last appointment, he revealed that he had increased his intake of 12-oz cans of beer from 3 to 6 cans a day due to stress at work. The physician advised him to seek help for his alcohol use as it could be causing his elevated blood pressure and has many negative health risks. The patient now tells the physician, "I thought about what you said. I know my alcohol use has gotten out of hand and is affecting my health. My wife and daughter also say that I need to quit. I have decided to look into options for treatment in my area." Which of the following best describes this patient's stage of behavioral change?

- A. Action (7%)
- B. Contemplation (30%)
- C. Intellectualization (1%)
- D. Maintenance (0%)
- E. Precontemplation (3%)
- ✓ F. Preparation (54%)
- G. Rationalization (2%)

Omitted
Correct answer
F

54%
Answered correctly

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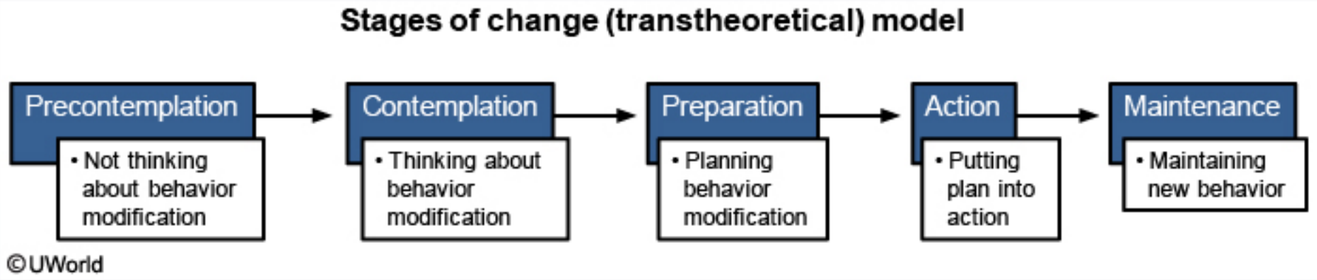
06/22/2020
Last Updated

Explanation

Stages of change (transtheoretical) model



Making changes is difficult and takes time and dedication. Most people move through **5 distinct stages** of change, beginning with initial denial of the problem (**precontemplation**), moving to acceptance that there is a problem (**contemplation**), and then planning (**preparation**) and putting into **action** changes that deal with the problem. Finally, these changes require **maintenance** over the long term. Patients often relapse and may have to repeat a certain stage(s) of change a number of times. This is part of the process and should be anticipated.

This patient has acknowledged that he has a drinking problem, has thought about making a change, and is preparing to take steps to manage the problem by seeking out available resources. In the preparation stage, the physician should encourage and facilitate the patient's plan to change (eg, reinforce his commitment to action, assist in identifying treatment resources).

(Choice A) In the action stage, active changes are made (eg, this patient enters treatment and reduces his drinking).

(Choices B and E) This patient has moved beyond the precontemplation and contemplation stages. In the precontemplation stage, patients do not acknowledge that there is a problem and often blame external circumstance or factors out of their control (eg, this patient believes that his increased drinking is not a problem and blames it on work stress). In the contemplation stage, the patient realizes and acknowledges the problem but is not ready to do anything about it (eg, patient thinks about quitting but takes no steps to do so). This stage is often characterized by ambivalence about change.

(Choices C and G) Intellectualization and rationalization are defense mechanisms rather then stages of change. In intellectualization, patients use intellectual argument to avoid painful feelings. Rationalization is the making of excuses to justify behavior or avoid the truth. Defense mechanisms are often used in the precontemplation or contemplation phases to avoid acknowledging that there is a problem or to avoid making lifestyle changes.

(Choice D) In the maintenance stage, behavioral changes are sustained. This stage is ongoing and requires sustained motivation (eg

(Choices B and E) This patient has moved beyond the precontemplation and contemplation stages. In the precontemplation stage, patients do not acknowledge that there is a problem and often blame external circumstance or factors out of their control (eg, this patient believes that his increased drinking is not a problem and blames it on work stress). In the contemplation stage, the patient realizes and acknowledges the problem but is not ready to do anything about it (eg, patient thinks about quitting but takes no steps to do so). This stage is often characterized by ambivalence about change.

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(Choice D) In the maintenance stage, behavioral changes are sustained. This stage is ongoing and requires sustained motivation (eg, maintaining abstinence).

Educational objective:
Behavioral change often happens in 5 distinct stages: Precontemplation (denial of the problem), contemplation (acceptance of the problem and thinking about change), preparation (planning to make a change in the near future), action (putting active changes into place), and maintenance (maintaining change over the long term).

References

- The transtheoretical model and substance dependence: theoretical and practical aspects.
- Stages of behavioral change for physical activity in high school students: prevalence and associated sociodemographic factors.
- Developing a productive workgroup within a community coalition: transtheoretical model processes, stages of change, and lessons learned.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Alcohol use disorder
Subject	System	Topic

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A 71-year-old woman is brought to the emergency department with suicidal ideation. Medical history includes major depressive disorder as well as chronic knee and back pain due to injuries sustained in a motor vehicle collision. Developmental history is significant for physical abuse as a child. Family history is significant for bipolar disorder and completed suicide in her father. The patient reports increasing depression since losing her job a year ago and separating from her husband of 40 years 6 months ago. She has a history of 2 prior hospitalizations for depression and a previous suicide attempt. The patient is recovering from alcoholism and attends weekly Alcoholics Anonymous meetings at her church. Although she lives alone, she is close to her daughter, who lives nearby. The patient reports that she owns a firearm that is kept in a locked cabinet. Which of the following is the strongest risk factor for completed suicide in this patient?

A. Access to firearms
B. Age >70
C. Female sex
D. History of childhood trauma
E. History of completed suicide in a parent
F. History of suicide attempt
G. Major depressive disorder
H. Recent marital separation

Submit

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- A. Access to firearms (43%)
- B. Age >70 (1%)
- C. Female sex (0%)
- D. History of childhood trauma (0%)
- E. History of completed suicide in a parent (1%)
- ✓ F. History of suicide attempt (49%)
- G. Major depressive disorder (1%)
- H. Recent marital separation (0%)

Omitted
Correct answer
F

49%
Answered correctly

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Explanation

Suicide risk & protective factors	
Risk factors	• Psychiatric disorders, prior suicide attempts • Hopelessness • Never married, divorced, separated • Living alone • Elderly white man • Unemployed or unskilled • Physical illness • Family history of suicide, family discord • Access to firearms • Substance abuse, impulsivity
Protective factors	• Social support/family connectedness • Pregnancy • Parenthood • Religion & participation in religious activities

A comprehensive suicide risk assessment involves considering both risk and protective factors. This patient has multiple risk factors for suicide, including her marital status, unemployment, psychiatric illness, **past suicide attempt**, family history of suicide, chronic pain, childhood abuse, and access to a firearm. Of these risk factors, a history of attempted suicide is the **strongest single factor** predictive of **completed suicide**.

Patients with previous suicide attempts are 5-6 times more likely to make another attempt. Studies suggest that 1 out of 100 people who survive a suicide attempt will complete suicide within a year. This is 100 times the risk seen in the general population. Protective factors in this patient include her status as a parent with a connection to her daughter, participation in her church, and sobriety (as alcohol and other drugs have disinhibiting effects that increase the risk of acting on suicidal impulses).

(Choice A) Studies suggest that the risk of completed suicide in those who have access to firearms is 3 times greater than in those who do not.

A comprehensive suicide risk assessment involves considering both risk and protective factors. This patient has multiple risk factors for suicide, including her marital status, unemployment, psychiatric illness, **past suicide attempt**, family history of suicide, chronic pain, childhood abuse, and access to a firearm. Of these risk factors, a history of attempted suicide is the **strongest single factor** predictive of **completed suicide**.

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(Choice A) Studies suggest that the risk of completed suicide in those who have access to firearms is 3 times greater than in those who do not.

(Choices B, C, and H) Age, male sex, and being separated/divorced are risk factors for suicide. Elderly (age >75) white men have the highest suicide rate. Although women attempt suicide nearly twice as often, men use more lethal methods (eg, firearms) that result in completed suicide 3 times more often. Suicide risk is highest in individuals who have never married, followed by those who are widowed, separated, or divorced.

(Choices D and E) A history of adverse childhood experiences (eg, abuse, parental discord, parental substance abuse) and a family history of suicide increase the risk of suicide, most likely due to both environmental and genetic factors.

(Choice G) Psychiatric illness, especially when associated with hopelessness, is a strong predictive factor for suicide. Of patients who die by suicide, 90% have a diagnosable psychiatric disorder at the time of death. Increased severity of illness and recent discharge from psychiatric inpatient care are additional risk factors.

Educational objective:
Suicide risk assessment includes consideration of both risk and protective factors. A history of a previous suicide attempt is the strongest single risk factor for further attempts and completed suicide.

References

- Determinants and outcomes of serious attempted suicide: a nationwide study in Finland, 1996-2003.
- Depression in primary care: assessing suicide risk.
- Literature-based recommendations for suicide assessment in the emergency department: a review.

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A 9-year-old girl is brought to the office by her mother for evaluation of frequent stomach aches. The mother says that her daughter has always had a "sensitive stomach" but that it has gotten worse since she started going to a new school a few months ago. The girl has been missing class due to being in the nurse's office multiple times per week. The patient's symptoms improve when her mother comes to get her. In response to the doctor's questions about the girl's peer relationships, the mother replies, "She has friends but never enjoys sleepovers." When the patient is at a friend's house, she often complains of stomach pain and nausea. She occasionally has nightmares about being left alone and wakes up crying. Although both parents are healthy, the patient says she worries about them "dying of a terrible illness, like cancer." Abdominal examination shows no abnormalities. Which of the following is the most likely diagnosis in this patient?

A. Adjustment disorder with anxious mood
B. Dependent personality disorder
C. Generalized anxiety disorder
D. Illness anxiety disorder
E. Separation anxiety disorder
F. Social anxiety disorder
G. Somatic symptom disorder

Submit

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- A. Adjustment disorder with anxious mood (3%)
- B. Dependent personality disorder (3%)
- C. Generalized anxiety disorder (2%)
- D. Illness anxiety disorder (2%)
- ✓ E. Separation anxiety disorder (81%)
- F. Social anxiety disorder (2%)
- G. Somatic symptom disorder (4%)

Omitted
Correct answer
E

81%
Answered correctly

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Time Spent

06/22/2020
Last Updated

Explanation

Although separation anxiety is common in young children and in older children at times of change or stress, this patient's distress is excessive and impairing when she is separated from her mother. Her inability to sleep away from home, abdominal pain when separated from her mother, worries about losing her parents, and nightmares about being left alone are consistent with **separation anxiety disorder**. Children with this disorder commonly experience **physical symptoms** (eg, headaches, stomach aches, nausea) when separation occurs or is anticipated, and have repeated **nightmares** involving the theme of separation. According to DSM-5, symptoms must be present for ≥4 weeks in children and ≥6 months in adults.

(Choice A) This girl's symptoms predate the stressor of starting a new school. In addition, adjustment disorders are not diagnosed when symptoms better meet the criteria for another disorder. As in this patient, stressful events often exacerbate symptoms of another disorder.

(Choice B) Patients with dependent personality disorder fear being left alone and seek out others to support and assume responsibility for them. However, personality disorders are not diagnosed in children as their personalities are still developing.

(Choice C) Generalized anxiety disorder involves chronic anxiety regarding multiple issues. This patient's symptoms occur in the context of separation, making separation anxiety disorder the appropriate diagnosis.

(Choice D) This child's fears focus on her parents becoming ill, causing her to be left alone. Illness anxiety disorder is diagnosed in individuals who excessively worry about having a specific illness themselves.

(Choice F) Social anxiety disorder is considered when anxiety and avoidance of social settings are due to worry about being viewed negatively by others. This child fears separation from her parents, not social rejection.

(Choice G) Patients with somatic symptom disorder have an ongoing preoccupation with physical symptoms; their anxiety is primarily related to their physical symptoms and health. This child's somatic symptoms are an expression of anxiety due to separation from attachment figures.

Educational objective:
Separation anxiety disorder consists of excessive and distressing anxiety (≥4 weeks in children, ≥6 months in adults) due to separation from attachment figures. Children with this disorder often experience physical symptoms and nightmares.

References

- Pediatric-onset and adult-onset separation anxiety disorder across countries in the World Mental Health Survey.

repeated **nightmares** involving the theme of separation. According to DSM-5, symptoms must be present for ≥4 weeks in children and ≥6 months in adults.

(Choice A) This girl's symptoms predate the stressor of starting a new school. In addition, adjustment disorders are not diagnosed when symptoms better meet the criteria for another disorder. As in this patient, stressful events often exacerbate symptoms of another disorder.

(Choice B) Patients with dependent personality disorder fear being left alone and seek out others to support and assume responsibility for them. However, personality disorders are not diagnosed in children as their personalities are still developing.

(Choice C) Generalized anxiety disorder involves chronic anxiety regarding multiple issues. This patient's symptoms occur in the context of separation, making separation anxiety disorder the appropriate diagnosis.

(Choice D) This child's fears focus on her parents becoming ill, causing her to be left alone. Illness anxiety disorder is diagnosed in individuals who excessively worry about having a specific illness themselves.

(Choice F) Social anxiety disorder is considered when anxiety and avoidance of social settings are due to worry about being viewed negatively by others. This child fears separation from her parents, not social rejection.

(Choice G) Patients with somatic symptom disorder have an ongoing preoccupation with physical symptoms; their anxiety is primarily related to their physical symptoms and health. This child's somatic symptoms are an expression of anxiety due to separation from attachment figures.

Educational objective:
Separation anxiety disorder consists of excessive and distressing anxiety (≥4 weeks in children, ≥6 months in adults) due to separation from attachment figures. Children with this disorder often experience physical symptoms and nightmares.

References

- Pediatric-onset and adult-onset separation anxiety disorder across countries in the World Mental Health Survey.
- Assessment and treatment of anxiety disorders in children and adolescents.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Separation anxiety disorder
Subject	System	Topic

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A 43-year-old woman comes to the office for an initial appointment due to ongoing abdominal pain, general weakness, decreased appetite, and dizziness. She says the pain is ruining her life and is worried that her previous physicians may have missed something. Over the past several years, the patient has been hospitalized 3 times with similar symptoms. No etiology for the pain has been identified despite extensive workups, including several abdominal CT scans and an exploratory laparotomy. The patient describes chronic abdominal pain since adolescence and is concerned as the nonprescription analgesics she takes are ineffective. She has no history of psychiatric diagnoses or substance abuse. Physical examination, vital signs, and laboratory tests (including chemistry panel, complete blood count, and urinalysis) are within normal limits. Which of the following is the most appropriate next step in the management of this patient?

- A. Explain that symptoms are psychological in nature
- B. Obtain gastroenterology consult
- C. Order abdominal MRI scan
- D. Prescribe an opioid analgesic
- E. Reassure that all tests are negative and further workup is not indicated
- F. Refer for psychiatric treatment
- G. Schedule regular outpatient office visits

Submit

A 43-year-old woman comes to the office for an initial appointment due to ongoing abdominal pain, general weakness, decreased appetite, and dizziness. She says the pain is ruining her life and is worried that her previous physicians may have missed something. Over the past several years, the patient has been hospitalized 3 times with similar symptoms. No etiology for the pain has been identified despite extensive workups, including several abdominal CT scans and an exploratory laparotomy. The patient describes chronic abdominal pain since adolescence and is concerned as the nonprescription analgesics she takes are ineffective. She has no history of psychiatric diagnoses or substance abuse. Physical examination, vital signs, and laboratory tests (including chemistry panel, complete blood count, and urinalysis) are within normal limits. Which of the following is the most appropriate next step in the management of this patient?

A. Explain that symptoms are psychological in nature (6%)

B. Obtain gastroenterology consult (3%)

C. Order abdominal MRI scan (1%)

D. Prescribe an opioid analgesic (1%)

E. Reassure that all tests are negative and further workup is not indicated (13%)

F. Refer for psychiatric treatment (16%)

✓ G. Schedule regular outpatient office visits (56%)

Omitted
Correct answer
G

56%
Answered correctly

02 secs
Time Spent

01/26/2020
Last Updated

Explanation

Management of somatic symptom disorder

• Schedule **regular visits** with **same provider**
• Limit unnecessary workup & referral to specialists
• Reassure that serious illness has been ruled out
• Legitimize symptoms but make functional improvement the treatment goal
  ◦ Decrease stress
  ◦ Improve coping strategies
• Mental health referral only once physician-patient relationship is well established

This patient's preoccupation with unexplained medical symptoms and excessive health care use are characteristic of **somatic symptom disorder**. The best approach is to schedule **regular visits** with her primary care provider, who can monitor her condition and **avoid unnecessary diagnostic testing** and **specialist referrals (Choices B and C)**.

In contrast to symptom-driven visits, regular visits provide patients with an opportunity to discuss their concerns without the need to have new or worsening symptoms. This may decrease the use of emergency services and encourage formation of a therapeutic alliance. Rather than focusing on symptom elimination, office visits should emphasize a return to occupational and social activities (functional improvement) and promotion of stress reduction and healthy behaviors (eg, diet, exercise).

(Choices A and F) This patient currently has no insight into the psychological nature of her disorder and would likely feel invalidated and unreceptive to being told that her condition is psychogenic and/or by getting referred to a psychiatrist for treatment. Once a physician-patient relationship is established, she may be able to accept that psychological distress plays a role in her condition and be more receptive to psychiatric referral.

(Choice D) Use of potentially addictive pain medication should be avoided.

(Choice E) Reassurance alone is rarely effective in managing somatic symptom disorder. Optimal management consists of regularly scheduled visits so that the patient does not need to have active symptoms to justify a visit.

Educational objective:
Somatic symptom disorder is best managed with regularly scheduled medical visits that are not contingent on having active symptoms.

diagnostic testing and **specialist referrals (Choices B and C)**.

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(Choice E) Reassurance alone is rarely effective in managing somatic symptom disorder. Optimal management consists of regularly scheduled visits so that the patient does not need to have active symptoms to justify a visit.

Educational objective:
Somatic symptom disorder is best managed with regularly scheduled medical visits that are not contingent on having active symptoms. Unnecessary diagnostic testing and specialist referrals should be avoided.

References

- Approach to the patient with multiple somatic symptoms.
- Medically unexplained symptoms.
- Somatic symptom disorder.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Somatic symptom disorder
Subject	System	Topic

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